LEXMARK™

Optra S

User's Guide

February 1998

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Introduction

This *User's Guide* contains information about the Optra S laser printer family (Optra S 2455, Optra S 1855, Optra S 1625 and Optra S 1255). This information includes printer menus and settings, printer messages, paper handling features, and print material specifications. Keep this book in a handy place and use it as a reference when you have a question about printer function or if you encounter a printing problem.

Note: The illustrations represent the Optra S 2455 unless indicated otherwise.

The *User's Guide* is divided into the following sections:

Getting Started

This section begins with illustrations of each printer model with its available options highlighted. Detailed steps are provided to set up your specific printer.

Using Your Printer

This section helps you understand printer functions and explains the operation of your printer.

Caring for Your Printer

This section explains how to solve printer problems, clear paper jams, and replace supplies.

Installing Options

This section provides step-by-step instructions to install options available for your printer.

Appendixes

This section provides information on fonts, print quality, printer specifications, features, and options.

Reference

This section contains notices, safety information, the warranty, the glossary, and the index.

If you need more technical information about printer languages and commands, interface specification, or managing printer memory, a *Technical Reference* is available from Lexmark. Simply complete the order form included with the printer registration card to request a *Technical Reference*. The *Technical Reference* is only available in English.

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Getting Started

Setting Up Your Printer

Chapter 1

Complete the following sections in this chapter to set up your printer.

Identifying Your Printer, Features, and Options

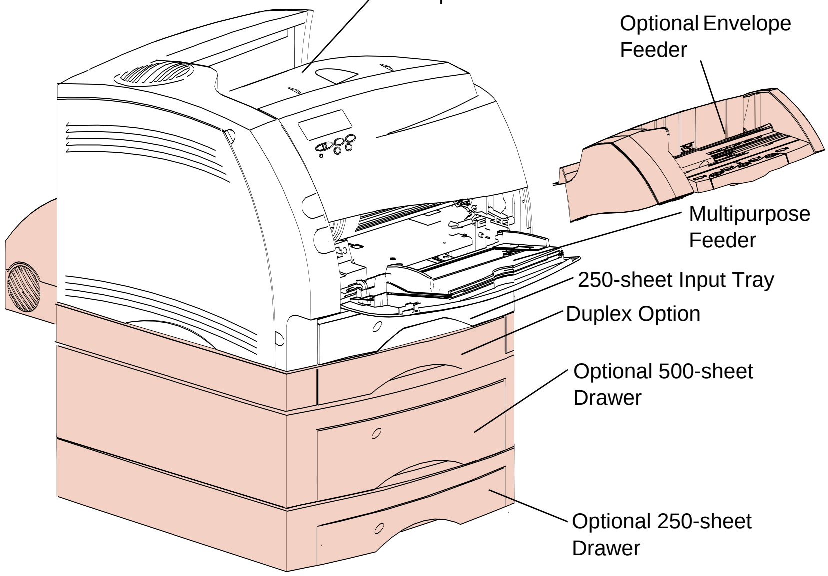
Use the following three illustrations on pages 2 through 4 to determine the features and options of the Optra™ S 1255, Optra S 1625, Optra S 1855, and Optra S 2455. The options are highlighted in color. The illustrations also aid you in determining the installation sequence of options and the printer.

Once you look at these pages, see "Unpacking the Printer" on page 5 to start the setup of your printer.

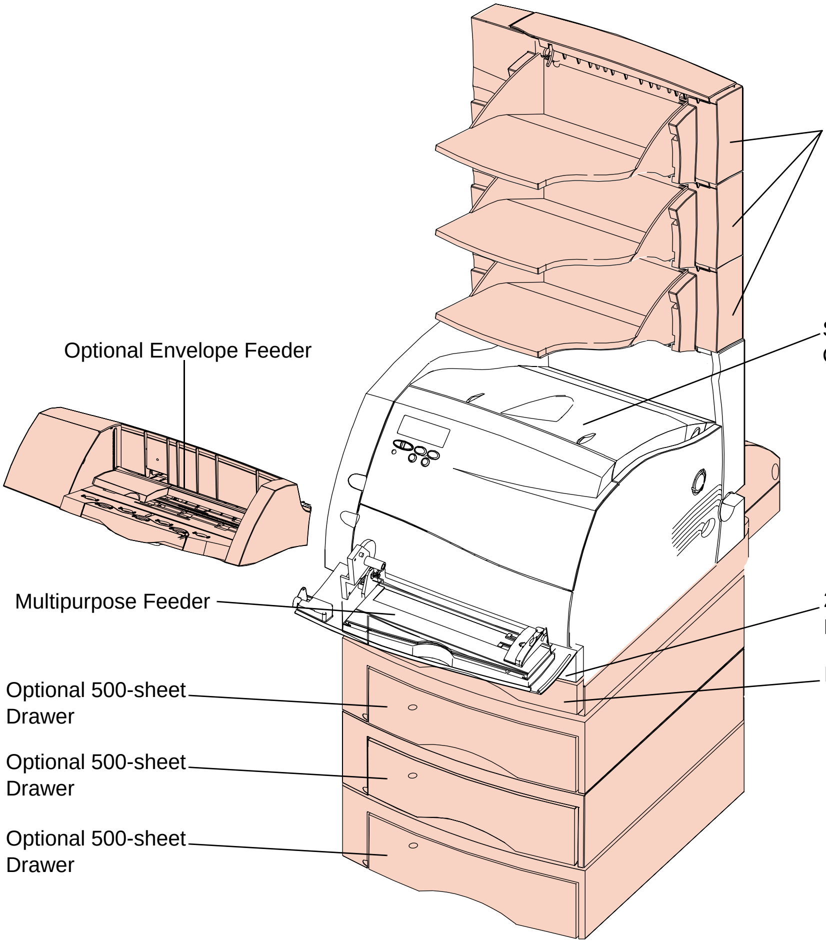
Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table below for the location of the circle on each option.

Option	Location of colored circle labels
All Paper Drawers	• Left front corner on top of the support unit
Envelope Feeder	• Left rear corner on top of the feeder
Duplex	• Left front corner on top of the unit
Output Expander	• Left front face of the unit *behind* the output expander tray (tray must be removed)

Optra S 1255 and Optra S 1625

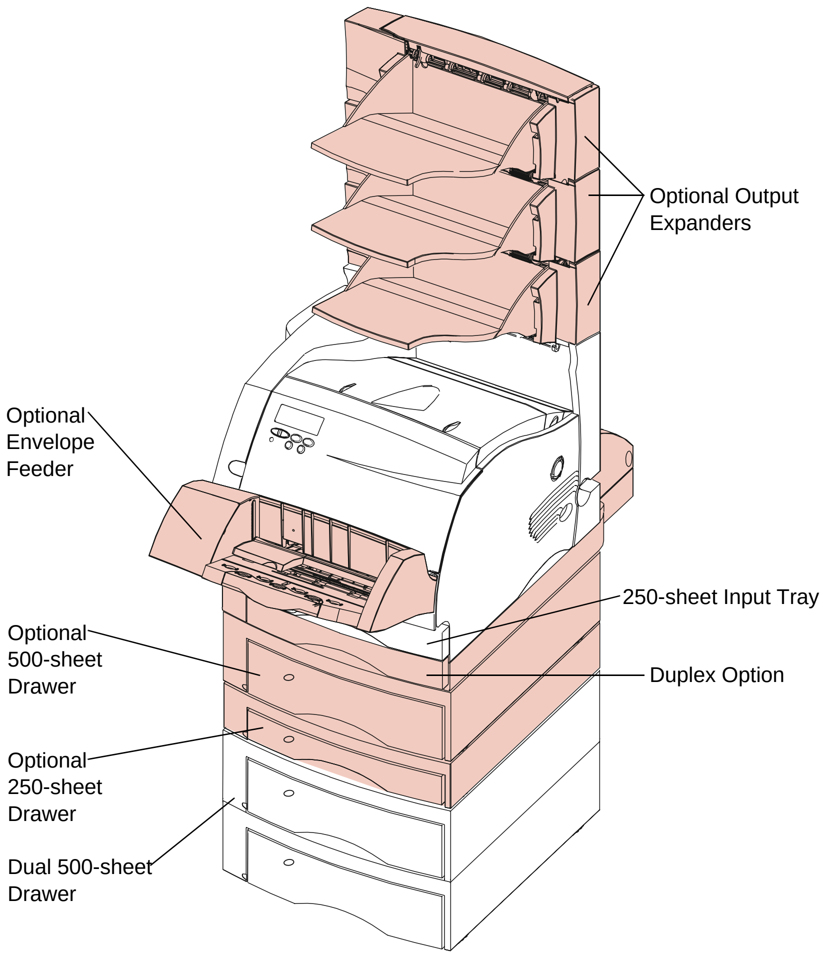


Optra S 1855



Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

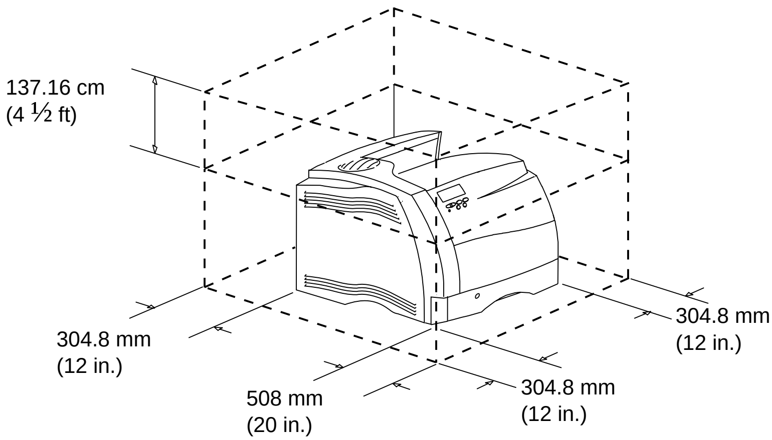
Optra S 2455


Optional Output
Expanders
Optional
Envelope
Feeder
250-sheet Input Tray
Optional
500-sheet
Drawer
Duplex Option
Optional
250-sheet
Drawer
Dual 500-sheet
Drawer

Unpacking the Printer

1 **Select a well-ventilated area as the location to set up your printer.** Make sure you have a sturdy, low table or the optional printer cabinet on which to set the printer.

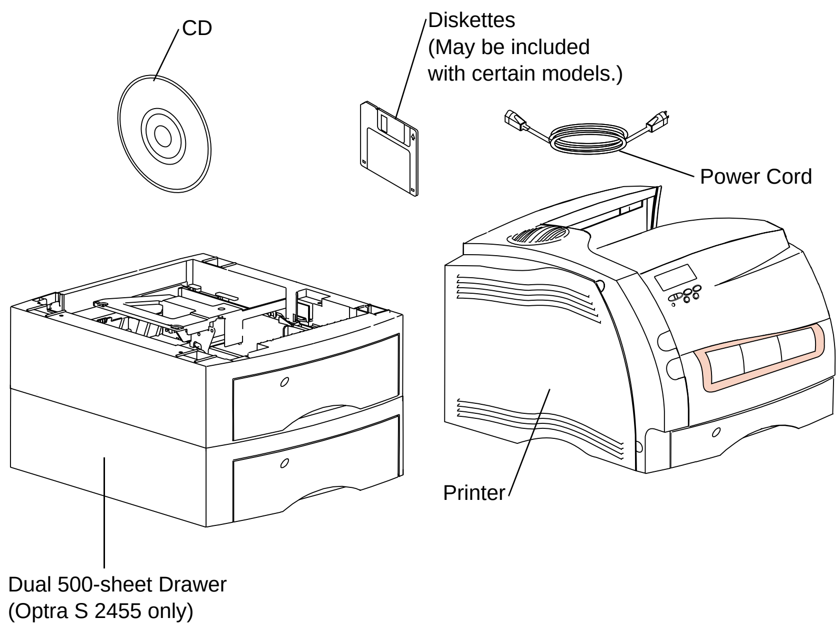
Allow at least 304.8 mm (12 in.) of clearance on all sides of the printer. Since you may want to install more printer options or the standard dual 500-sheet drawer for the Optra S 2455, leave 137.16 cm (4 ½ ft) clearance above the printer.



2 **Remove all items from the box except the printer. Make sure you have the items shown.** If any items are missing, contact the place where you bought the printer.

Save the carton and packing material in case you need to repack the printer for service or storage.

CAUTION: Leave the printer in the box until you are ready to install it. Then use the hand grips on the printer or ask someone to help you lift it. Make sure your fingers are not under the printer when you set it down.



Setting Up Your Printer

Determining What to Install Next

Install the following based on the printer you purchased.

If you have purchased optional 250-sheet drawers, 500-sheet drawers, a 2000-sheet drawer, or the duplex option, install them now before the printer is set in place. See the table in “Adding Options to the Printer” on page 253 for more information. See the illustrations on pages 2, 3, and 4 to determine the order to install options.

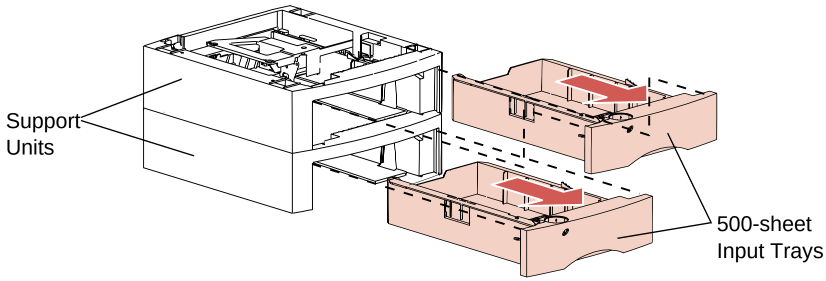
If you have an Optra S 2455, install the dual 500-sheet drawer. See “Installing the Dual 500-Sheet Drawer” as follows.

Installing the Dual 500-Sheet Drawer

The dual 500-sheet drawer is standard on the Optra S 2455. It consists of two attached support units. Each support unit contains a 500-sheet input tray.

1 **Remove the dual 500-sheet drawer from the packaging.**
Remove any packing tape.

2 **Pull the trays out of the support units.**

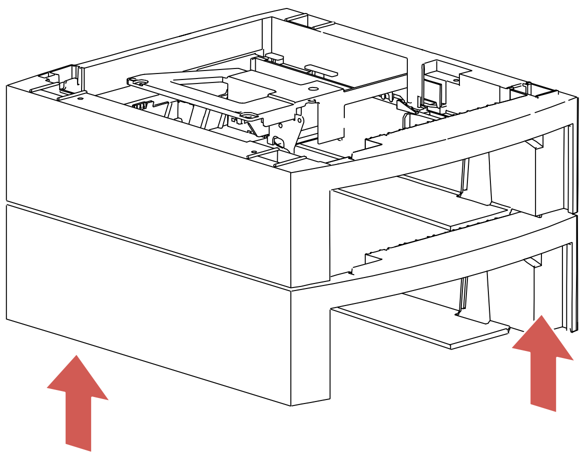


3 **Remove all packing material and tape from the trays.**

Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

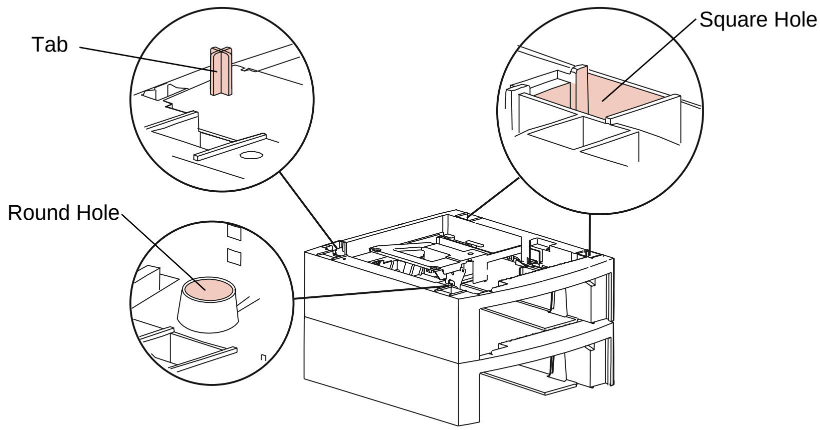
Note: Decide on an installation location to set the dual 500-sheet drawer. *The printer will be placed on top of it*, so allow enough clearance space. The location must be sturdy and large enough to accommodate the dual 500-sheet drawer and the printer. See page 5 for information on clearance space.

4 **Grasp the dual 500-sheet drawer on each side at opposite corners and move it to the table or printer cabinet you selected as the installation location.**



Setting Up Your Printer

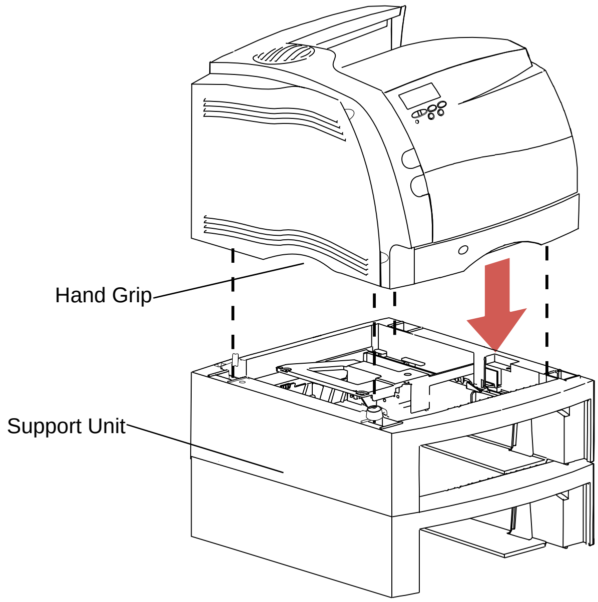
5 **Locate the following parts on the top surface of the upper support unit: the tab, the round hole, and the four square holes.** The bottom surface of the printer has matching holes or feet that accommodate the tab, round hole, and four square holes.



Note: If you have purchased *optional drawers* or the *duplex option*, install them now before the printer is set in place.

CAUTION: Make sure your fingers are not under the printer when you set it down. Use the hand grips on the printer or ask someone to help you lift it.

6 **Lift and place the printer on top of the support unit. Be sure the edges of the printer and the support unit are aligned so all the parts fit.** The right side of the printer is aligned with the option.



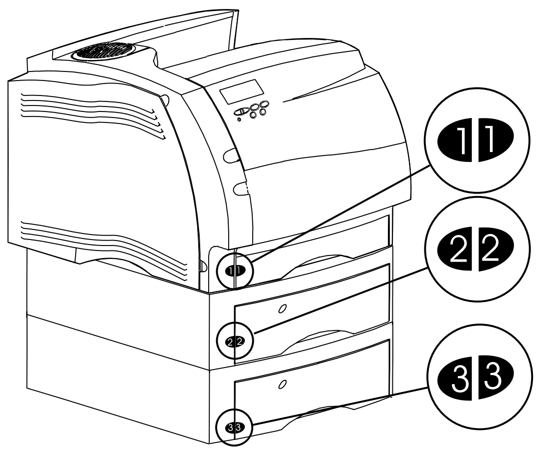
Setting Up Your Printer

Attaching the Decals

Decals, showing the number one, are on your printer and the 250-sheet input tray as shown. This pair of decals keeps the 250-sheet input tray paired with the printer.

If you purchased an Optra S 2455 or optional drawers, you received a sheet of decals.

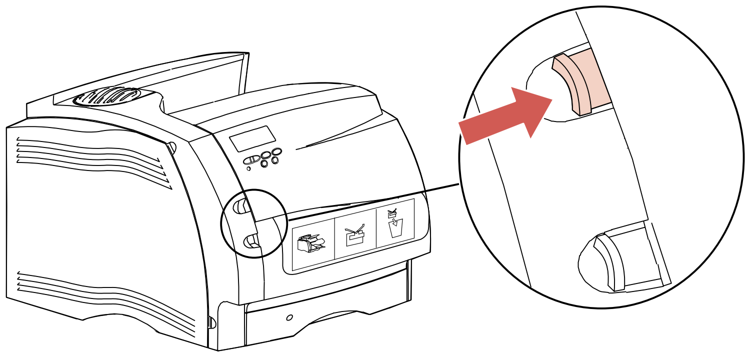
Peel the decals from the sheet and attach them to the recessed areas on the support unit and the matching tray as shown.



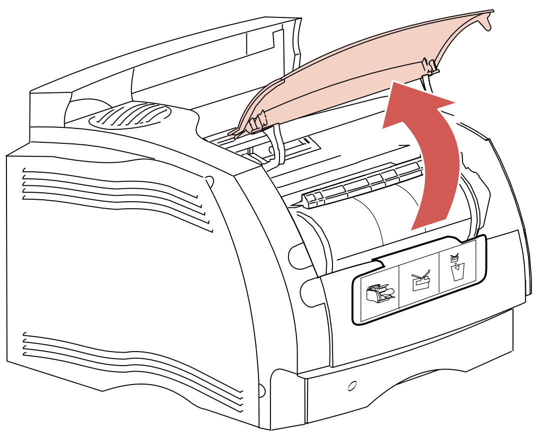
By using the decals you can keep the paper trays paired with the matching supports units. Using the labels and setting the paper size window (see page 23) helps you remember what paper size you have loaded into each tray. This is valuable information to have before you start setting values on the operator panel that relate to paper source, size, and type.

Removing the Print Cartridge Packaging

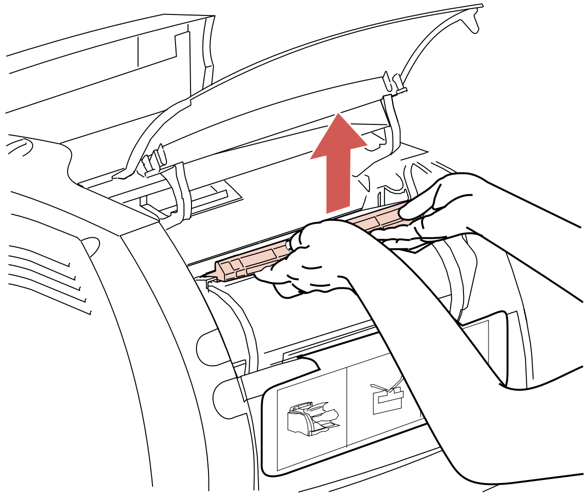
1 **Push the upper release latch to the right to release the upper front door.**



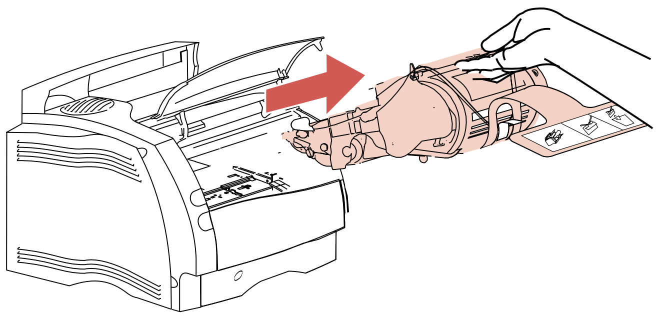
2 **Raise the upper front door.** It remains in place**.**



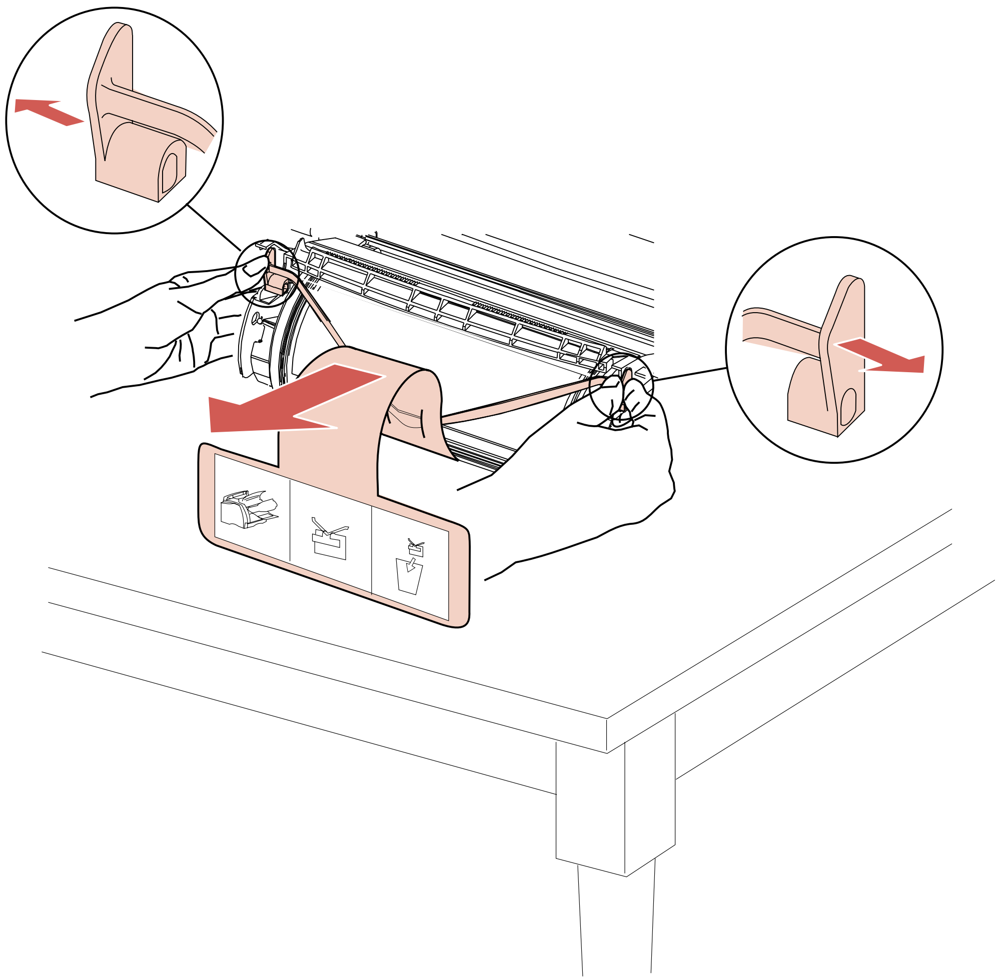
3 **Grasp the print cartridge by the hand grip.**



4 **Pull the print cartridge up and out.**

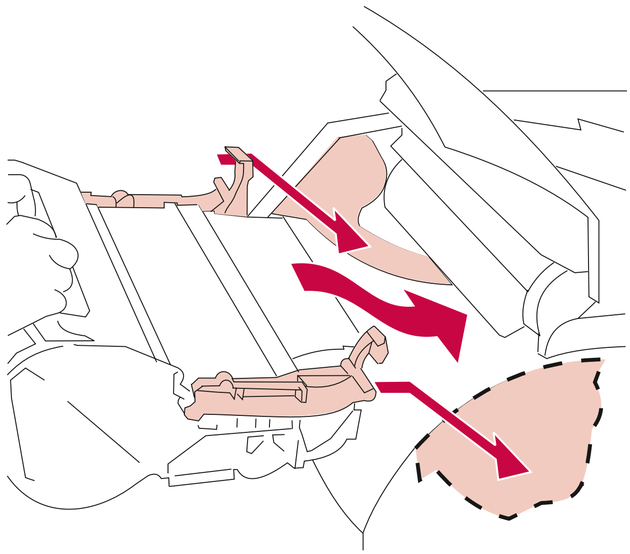


5 **Pull on each end of the plastic, V-shaped piece and then pull the packaging material straight out.** Discard all packaging material: the V-shaped piece, the foam, and the paper connected to the foam.

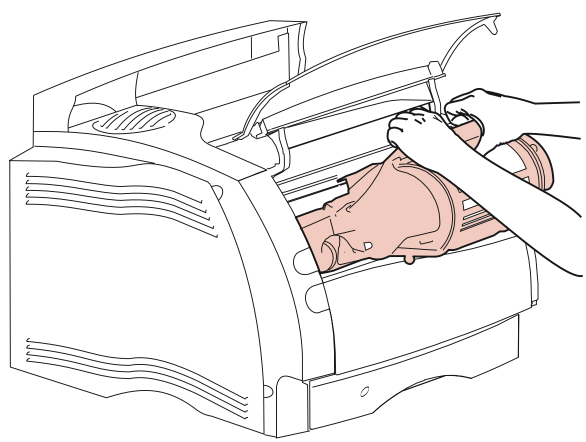


Setting Up Your Printer

6 **Reinstall the print cartridge. Align the side slides on the print cartridge with the slots on the print cartridge cradle. Use the colored arrows inside the printer for placement.**



7 **Guide the print cartridge down as it drops into place.** The cartridge snaps into place.

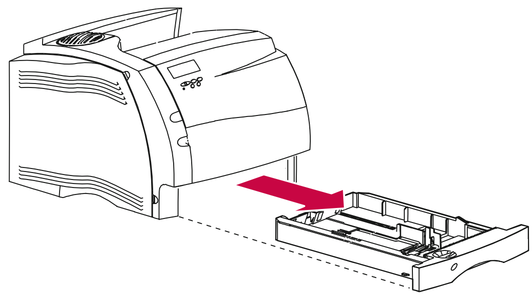


8 **Close the upper front door.**

Removing the 250-Sheet Input Tray

The 250-sheet input tray is the standard tray in the printer.

Remove the 250-sheet input tray by pulling it out of the printer. Remove any packing material.

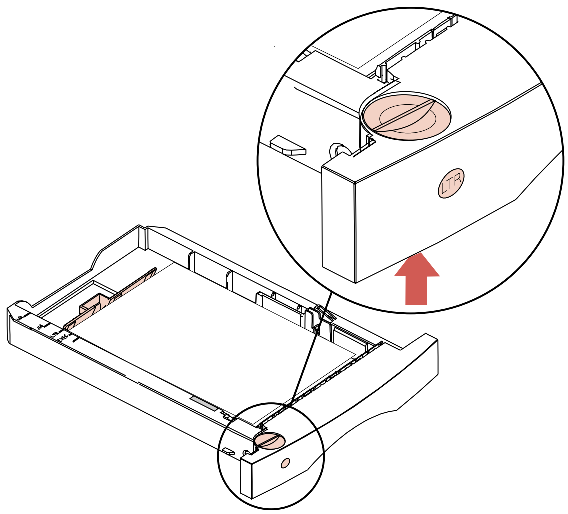


Adding Names to the Paper Tray Knob

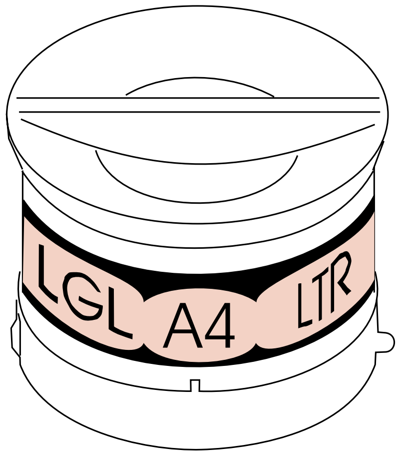
The paper tray knob shows common paper sizes. It has spaces for you to write custom names or sizes. If you want to customize the paper tray knob, complete the following instructions.

1 **Turn the knob on the paper tray so the bar on the knob is parallel with the front of the tray.**

2 **Reach underneath the tray and push up on the knob.**



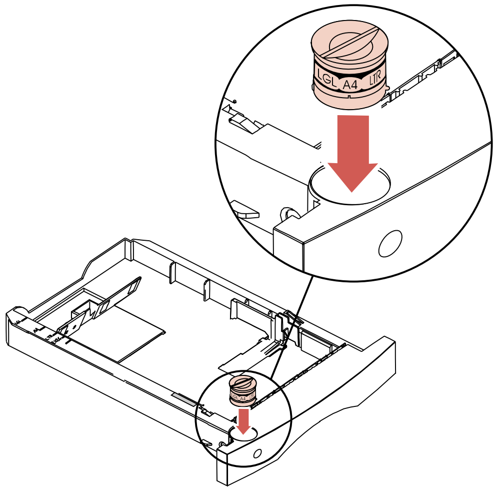
3 **Pull the knob out of the tray.** Notice the label on the lower portion of the knob.



The abbreviations for certain paper size names are pre-printed on the label. The size names are *LGL* for legal-size paper, *A4* for A4 paper, and *LTR* for letter-size paper. Notice the extra spaces on the label.

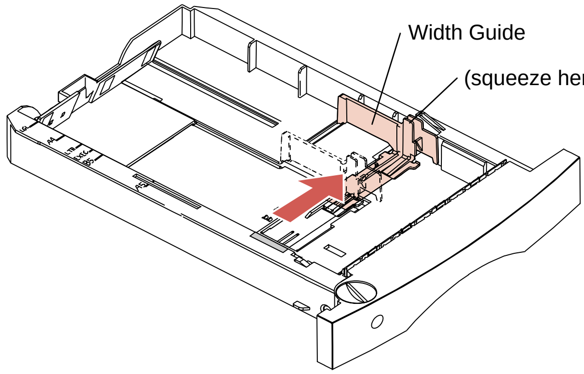
4 **Write your customized abbreviations on the label in the spaces provided.**

5 **Align the knob so the bar is parallel with the front of the tray and push the knob down.**



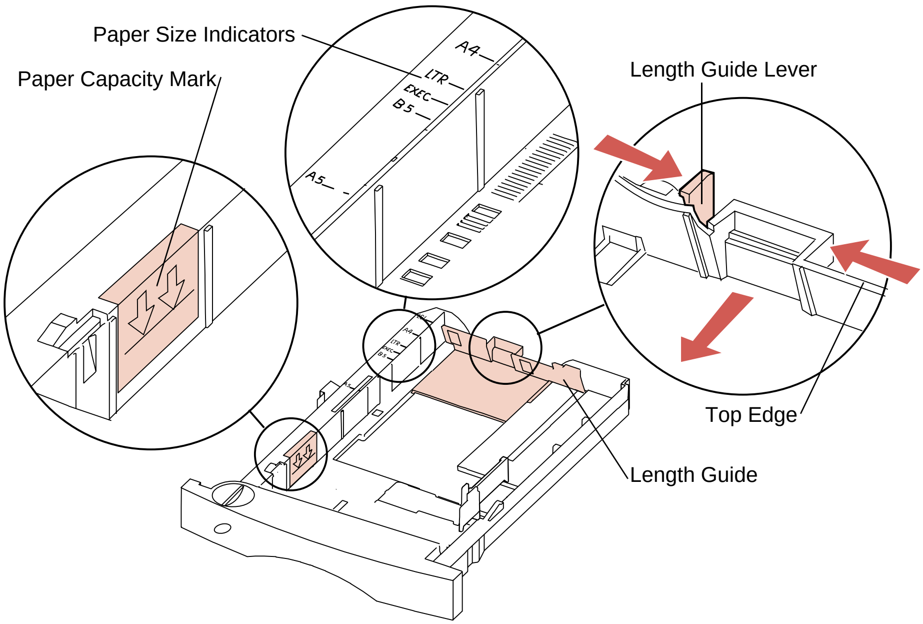
Loading the 250-Sheet Input Tray

1 **Squeeze the width guide lever and slide the width guide to the far right side of the tray.**



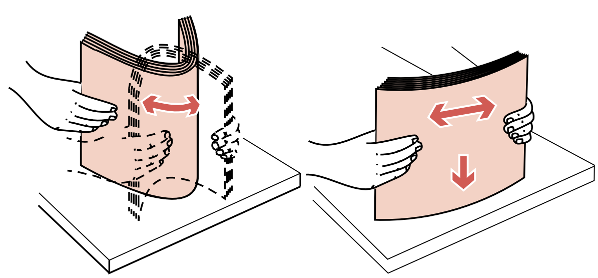
Note: Before you put paper in the tray, adjust the tray size for your paper. This example shows how to adjust for letter size paper (LTR). Notice the *paper size indicators* printed on the top left surface of the tray. These abbreviations indicate the paper sizes. The paper size indicators help you in the placement of the length guide.

2 **Squeeze the length guide lever and slide the length guide to the correct position for the paper size you are loading.**



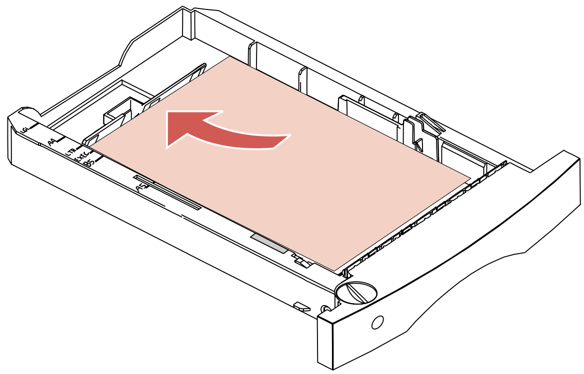
Note: Do not fill paper above the paper capacity mark (fill line) on the left inside wall of the paper tray. The top edge of the length guide serves as a fill line, also. If the paper stack exceeds the full level, the excess paper is pushed out the front of the tray when you install the tray. Also, paper may jam in the printer.

3 **Flex the paper back and forth.** Do not fold or crease the paper. Straighten the edges on a level surface.

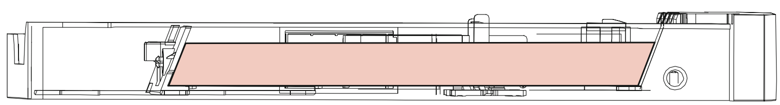


Setting Up Your Printer

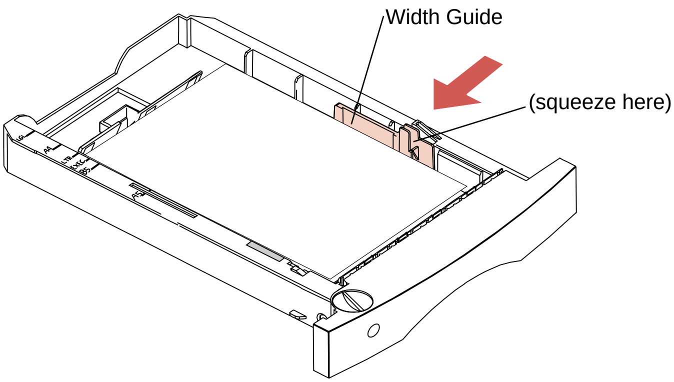
4 **Place the paper into the paper tray with the recommended print side face down and the bottom edge going in first toward the length guide.** Do not overload the paper tray. To load letterhead, see page 150.



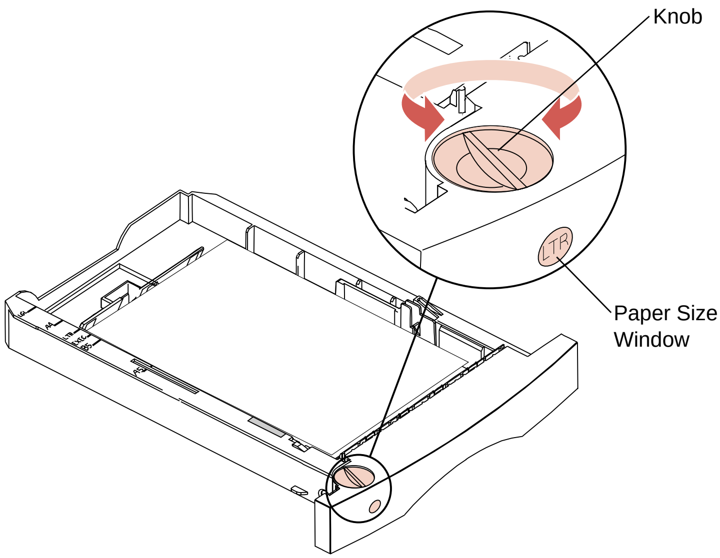
When the paper is loaded into the tray, the paper is stacked at an angle. The paper tray wall at the front of the tray is angled as this cross-section of the tray illustrates. If you readjust the length guide lever once the paper is in the tray, do not push it too far. Pushing the length guide lever too far causes the paper to move up along this angled wall and jam.



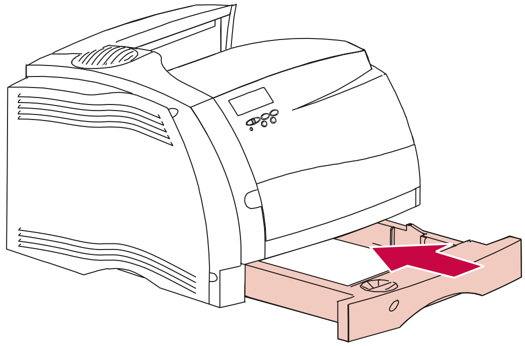
5 **Squeeze the width guide lever and slide the width guide to the left until it lightly rests against the edge of the paper stack.**



6 **Turn the knob for the paper size window to show the size of the paper you are loading, for example, LTR.** This serves as a visual reminder of the paper size currently loaded.



7 **Slide the paper tray all the way in until it snaps into place.**



8 **Load paper in trays for any other drawers you have installed previously.**

Note: Paper is loaded into all trays in the same manner as the 250-sheet input tray.

9 **Insert the trays into the matching support units.**

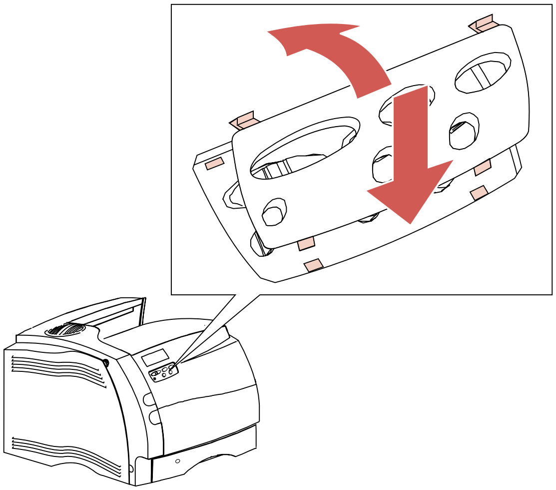
Note: If you have purchased any other options, install them now.

Installing the Operator Panel Overlay

You may need to install the operator panel overlay for your language.

1 **Locate the overlay packaged with your printer.**

2 **Press the new overlay into place on the operator panel.** It snaps into place.

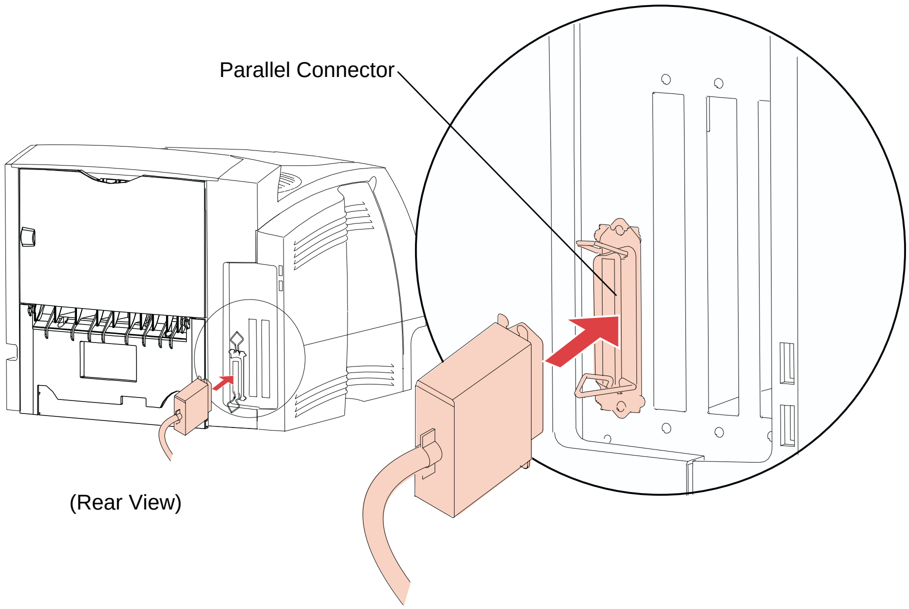


Note: See “Display Language” on page 92 if you want to change the country language displayed on the operator panel.

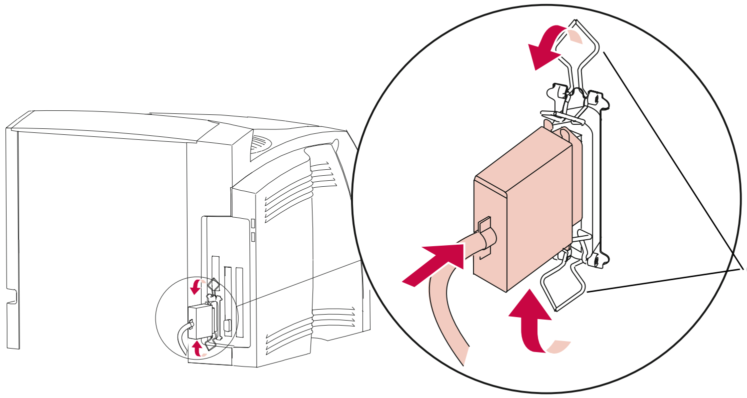
Attaching a Parallel Cable

Use IEEE 1284-compliant cable. We recommend Lexmark® part number 1329605 (10 ft) or 1427498 (20 ft).

1 **Align and plug the cable into the parallel connector as shown.**



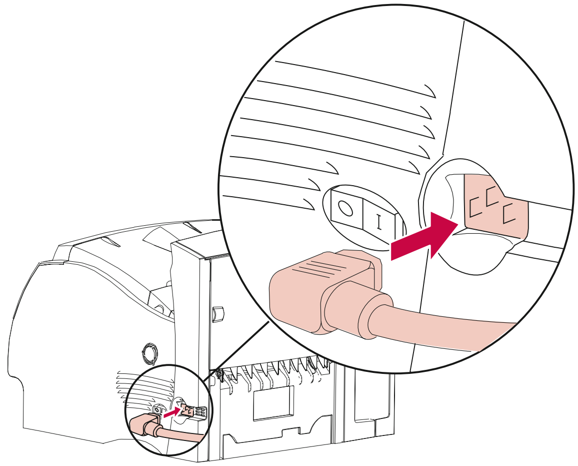
2 **Push the clips at each end of the connector into the notches on the parallel cable.** The clips snap when pushed into the notches.



3 **Attach the other end of the cable to the computer.**

Plugging the Printer In

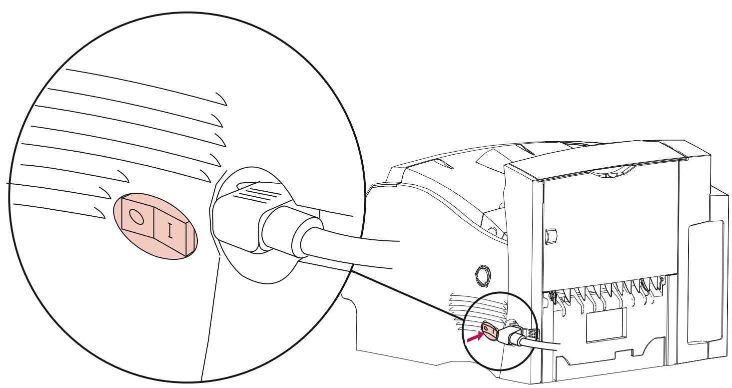
1 **Plug the printer power cord into the printer.**



2 **Plug the other end of the printer power cord into a properly grounded electrical outlet.**

Turning the Printer Power On

Turn the printer power On (|).



Printing a Test Page

WARNING: Complete “Removing the Print Cartridge Packaging” on page 12 before you print a page.

1 **Make sure the printer power is On (|) and the Ready status message appears on the display.**

Note: See “Using the Operator Panel and Menus” on page 51 to identify the display and operator panel buttons if you need help.

2 **Press Menu> or <Menu to enter the menus.**

3 **Continue to press and release Menu> until you see TESTS MENU.**

4 **Press Select to show the list of menu items for the TESTS MENU.**

Continue to press and release **Menu>** until you see **Print Menus** on the second line.

5 **Press Select to select Print Menus.**

The message, **Printing Menu Settings**, is shown on the display and remains on the display until the page prints. The page shows current settings for the menus and a list of installed options. You can use this page to verify that all the printer options are properly installed and the printer settings are set to what you want.

The page prints to indicate the printer is operational. However, if an error message appears, see “Understanding Printer Messages” on page 177 for more information.

The printer returns to the **Ready** status message when the page or pages finish printing.

Installing Printer Drivers and Utilities

1 **Locate the CD that was shipped with your printer.**

Note: If you do not have access to a CD-ROM drive, you can transfer the information on the CD to diskettes. Locate a computer with a CD-ROM drive, start the CD-ROM utility, and then follow the instructions on the screen to create diskettes.

2 **Follow the instructions in the booklet included with the CD to start the printer setup utility appropriate for your operating system.**

The setup utility installs printer drivers and utilities that lets you manage Lexmark printers attached to your network. See “Using the Printer Utilities” on page 31 for details about the printer drivers and the network management tools available with MarkVision™ and the other printer utilities.

3 **If necessary, use standard network software to identify the printer to the LAN and to complete any other setup that may be needed.**

Note: Consult your network software documentation for more information. Also, see “Using the Printer Utilities” on page 31 for more information.

Using the Printer Utilities

Chapter 2

Setup Utility

The CD shipped with your printer contains separate setup utilities for Windows 95, Windows 3.1, Windows NT 4.0, Macintosh, OS/2, and DOS environments. The setup utility lets you quickly install printer drivers as well as the MarkVision printer utility.

Note: See the documentation that comes with the diskettes and the CD for installation instructions. Diskettes are only included with certain printer models.

Help is available from each screen of the utility. Highlight the item you want to know more about, then press F1. Press ESC to exit the online Help.

Installing Printer Utilities

The setup utility installs printer utilities that help you manage your printer or your network of printers. The utilities it installs depend on your operating system. If you're using Windows 95, Windows 3.1, Windows NT 4.0, Macintosh, or OS/2 Warp, you can install the MarkVision utility. If you're using other versions of OS/2 or if you're using DOS, you can install the printer Toolkit.

Note: MarkVision for UNIX networks is available on a separate CD and may be purchased separately.

For details about the utilities, refer to the pages indicated in the following table:

Utility	See page…
MarkVision	36
Toolkit	46
Network Printer Utility	47

MarkVision for a Network

The following table defines which workstation operating systems can support MarkVision in various network environments. Depending on your network configuration, all of the utilities necessary to install MarkVision on your workstations are included on the CD. See page 47 for more information about the Network Printer Utility.

MarkVision network support

Network operating system	Workstation operating system					
	Windows 95	Windows NT 4.0	Windows 3.1x	OS/2 Warp[2]	UNIX /AIX	Mac-intosh
Novell NetWare 3.x, 4.x	Yes[4]	No	Yes	No	No	No
Windows NT Server 3.51	Yes [1]	Yes	Yes [1]	No	No	No
Windows NT Server 4.x[5]	Yes	Yes	Yes	No	No	No
Windows 95 (Peer-to-Peer)	Yes	No	No	No	No	No
OS/2 LAN Server and OS/2 Warp[2] Server	Yes [3]	No	Yes [3]	Yes	No	No
TCP/IP[6]	Yes	Yes	Yes	Yes	Yes	No
AppleTalk	No	No	No	No	No	Yes

1 To set up the Windows NT server to support clients using Windows operating systems, select “Server Utilities” from the Install window when running the Network Printer Utility.

2 Requires a bidirectional print spooler. Request the latest FixPak from IBM.

3 To set up the OS/2 server to support clients using Windows operating systems, select “Server and Workstation Utilities” from the Install window when running the Network Printer Utility.

4 Requires a 32-bit Requester from Novell.

5 To set up the Windows NT server, use the MarkVision installation procedures from the CD for network support. Select “MarkVision Server Agent” and install it.

6 Server/Network operating system independent.

Printer Drivers

Printer drivers for the following operating systems and applications are included on the CD:

- Windows 95
- Windows 3.1
- Windows for Workgroups 3.11
- Windows NT 4.0
- Macintosh
- OS/2 Warp
- OS/2 2.1 or later
- WIN-OS/2 for OS/2 2.1 or later
- DOS applications:
  - WordPerfect 5.1, 6.0
  - Lotus 1-2-3 2.x, 3.x

Note: All drivers are also available electronically. See page 47 for more information.

If you select the “Server” installation method when you run the Windows setup utilities, the MarkVision utility for Windows environments that is installed on your system can help ensure that all network users have the latest printer drivers. When launched, MarkVision compares the drivers on the local workstation to those stored on the network. If the workstation drivers are not as current as those available on the network, you can have MarkVision automatically update the workstation drivers.

Getting Other Printer Drivers

Additional printer drivers may have been developed since this book was printed. If the driver you need for your operating system or your DOS application is not included on the CD, it may be available from Lexmark or from the software developer. Lexmark maintains several resources for obtaining current drivers. See “Getting Updated Drivers and Utilities” on page 47.

If the drivers you need are not available with your software application, contact the software company or a representative where you bought your printer. If you install MarkVision for Windows 3.1, a separate Lexmark Support icon is included in the MarkVision Printer Utility group on the Windows desktop. If you are using MarkVision for Windows 95, the phone numbers are included in the online Help.

If you cannot locate a driver for your DOS application, you can use one of the drivers listed in the following table. When you use these alternate printer drivers, your printer supports only those functions provided by the driver and may not support the full function possible with your printer.

Alternate printer drivers

Printer language	Printer (in preferred order)
PCL 5 emulation	Lexmark Optra S Lexmark Optra plus Lexmark Optra HP LaserJet 5Si
PostScript Level 2 emulation	Lexmark Optra S Lexmark Optra plus Lexmark Optra HP LaserJet 5Si
PCL 6 emulation	Lexmark Optra S HP LaserJet 5

Bidirectional Communication

Your printer is capable of intelligent communication with your computer and the network. Not only can it receive information from software applications, but it can also send back messages about the work it's doing and what it needs to complete the task.

This intelligent bidirectional communication, Network Printing Alliance Protocol (NPAP) 1.0 standard, is part of the printer design. The utilities and drivers that are shipped with the printer take advantage of this advanced communication capability.

MarkVision

The MarkVision graphical user interface provides ongoing status for Lexmark printers connected locally or attached directly to the network by way of an optional network adapter. The status reported includes all messages appearing on the operator panel display if you are administrating the remote operator panel, as well as information about options installed on the printer and printer default settings. Workgroup administrators or key operators can monitor only those printers they are responsible for by using a helpful list of print queues that can be listed through MarkVision.

When minimized on your screen, the MarkVision icon flashes to let you know there is a problem with a printer. You can maximize the window to see a graphic of the printer and detailed information about the problem.

MarkVision can save you a lot of time setting up a network of Lexmark printers. The Quick Setup function lets you create a printer configuration file at your workstation, save the printer settings in the file, and then send the settings to other printers on the network.

By using the MarkVision job statistics utility, you can also keep track of network printer activity. MarkVision helps you collect printer usage statistics and create charge-back reports, including information about total jobs printed, total pages, and average print time. MarkVision can also provide information about jobs currently in the print buffer.

MarkVision Windows

The appearance of the MarkVision window on your computer display varies, depending on your operating system and your network and printer configuration.

MarkVision Support in Various Environments

Refer to the following MarkVision support table to determine the features available in the MarkVision utility installed on your workstation operating system. Summaries of each of the features follow. Scroll through the online Help included with MarkVision for more information about its various features.

MarkVision utilities for Windows 95, Windows 3.1x, Windows NT 4.0, Macintosh, and OS/2 Warp were shipped with your printer. You can purchase MarkVision for UNIX Networks from Lexmark. Contact a representative at the place where you bought the printer for more information.

Lexmark is continually updating printer utilities to provide you optimum printer control. To get information about the newest versions of MarkVision, which may include new features or enhanced functions, use the Lexmark resources listed under “Getting Updated Drivers and Utilities” on page 47.

Feature support

Feature	Windows 95 and NT 4.0	Windows 3.1	OS/2 Warp	UNIX	Mac
Printer configuration: control and visual status	Yes	Yes	Yes	Yes	Yes
Remote operator panel	Yes	Yes	Yes	Yes	Yes
Status and alerts	Yes	Yes	Yes	Yes	Yes
Auto driver update	Yes	Yes [1]	No	No	No
Toolkit	Yes [3]	Yes	Yes [3]	Yes	Yes [3]
Basic resource management	Yes	Yes	Yes	Yes	Yes
Enhanced resource management	Yes	Yes	Yes	Yes	Yes
Hard disk partitioning[4]	Yes	Yes	Yes	Yes	No
Printer inventory	Yes	Yes	Yes	Yes	Yes
Job statistics	Yes	Yes	Yes	Yes	Yes
Job queue management	Yes	Yes [1]	Yes [2]	Yes	No
Print buffer management	Yes	Yes	Yes	No	Yes
Drag-and-drop printing through MarkVision	No	Yes[5]	No	No	No
Dynamic Data Exchange (DDE)	No	Yes	No	No	No
Printer Access Security	Yes	Yes[5]	Yes	Yes	No
Dial up support (TCP/IP)	Yes	Yes	No	Yes	No
Output Expander Naming	Yes	Yes	Yes	No	No
Media Type Control	Yes	Yes	Yes	No	No
Printer Password Access Security Control	Yes	Yes	Yes	No	No
Uninstaller for MarkVision	Yes	Yes	Yes	Yes	Yes

1 Not supported for TCP/IP networks.
2 Support for this feature provided by the operating system.
3 Toolkit functions are available, although they are not identified by the “Toolkit” name.
4 If supported by the printer
5 Limited function

Feature support

Feature	Windows 95 and NT 4.0	Windows 3.1	OS/2 Warp	UNIX	Mac
Management Information Format (MIF) File Creation from Printer Inventory	Yes	No	Yes	No	No
Property Tag Support	Yes	Yes[5]	Yes	Yes	No
Toner Level Sensing	Yes	Yes	Yes	Yes	No
Printer Inventory Summary Page	Yes	No	Yes	Yes	No
Menus	Yes	No	Yes	No	No

1 Not supported for TCP/IP networks.
2 Support for this feature provided by the operating system.
3 Toolkit functions are available, although they are not identified by the "Toolkit" name.
4 If supported by the printer
5 Limited function

Printer Configuration

The MarkVision Quick Setup features let you configure multiple printers simultaneously. Simply set up one printer, save the settings into a file, and send that file to all the other printers you want to update through MarkVision.

Remote Operator Panel

The MarkVision remote operator panel provides an exact replica of the selected printer operator panel. The menus and messages appear just as they do on the printer display. You can then use the operator panel buttons to step through the menus and change printer settings. In addition, for Windows 95, Windows NT 4.0, and OS/2, a full-menu display of the operator panel is available. It allows a window-like graphical user interface.

Status and Alerts

You can determine the current status for each printer and see a graphic of the options installed on each printer. With this information, you can then easily identify the printer best suited for a particular print job.

Unlike other network printer management software, the MarkVision alert-driven architecture lets you actively monitor the status of multiple printers on a real-time basis without polling. If an error occurs on a printer attached to your network, MarkVision immediately provides a visual and audible alert without excess network traffic.

Auto Driver Update

If you select the “Server” installation method when you run the Windows 3.1, Windows 95, or Windows NT 4.0 setup utility, MarkVision for Windows can compare the drivers on a local workstation to those stored on the network. If the workstation

drivers are not as current as those available on the network, you can have MarkVision automatically update the workstation drivers.

Toolkit

MarkVision for Windows 3.1 groups several resource management tools in the printer Toolkit. Use the Toolkit to download fonts, overlays, and forms to the printers, as well as manage the resources once they are stored in flash memory or hard disk.

MarkVision for Windows 95, MarkVision for Windows NT 4.0, MarkVision for OS/2 Warp, MarkVision for Macintosh, and MarkVision for UNIX Networks offer the same tools, although they are not grouped in a “Toolkit” form.

Basic Resource Management

MarkVision provides a directory of all the fonts, overlays, and forms stored in flash memory or hard disk. The directory also lists the amount of available memory for each storage device. You can then use MarkVision to delete, move, or copy files from one storage device to another on the same printer.

Enhanced Resource Management

Use MarkVision to copy or move files stored on flash memory or hard disk from one printer to another. MarkVision also lets you recover or defragment space on flash memory after deleting files. In addition, you can use MarkVision to password protect resources on the storage devices.

Hard Disk Partitioning

Use MarkVision to designate a percentage of the optional hard disk memory for job buffering to hard disk. You can then enable or disable job buffering for each of the interface ports (parallel, serial, network 1, network 2, and network 3). Refer to the *Technical Reference* for more information about job buffering to hard disk.

Printer Inventory

MarkVision can collect information about the printers on your network and print a report listing the printer models, serial numbers, code versions, and installed options. The report can be saved in two ways: comma delimited format or a MIF format.

MIF File Creation from Printer Inventory

Data is stored in MarkVision in three ways: a print list, a comma delimited format, or a MIF format. MIF and comma delimited are the newest ways to store data.

Printer MIF lets you gather detailed information about each printer on the network. For each printer you select, you create one .mif file.

The .mif files can be imported to use in various Network Management Tools for creating reports, such as asset management. The .mif file format is based on the standard layout approved by the Desktop Management Task Force (DMTF).

Printer Inventory Summary Page

MarkVision collects information about the printers on your network which includes the printer models, serial numbers, code versions, and installed options. MarkVision lets you print a one page summary report listing of all the items associated with a printer for all the printers on a network.

Job Statistics

MarkVision can collect data about network printer activity, including user names, job duration, printer capabilities used, number of pages printed, and problems encountered.

Job Queue Management

Network administrators using MarkVision for Windows 3.1, Windows 95, and Windows NT 4.0 can view, release, reorder, and cancel print jobs in server queues.

Print Buffer Management

Network administrators using MarkVision for Windows 3.1, Windows 95, Windows NT 4.0, MarkVision for OS/2 Warp, or MarkVision for Macintosh can also view and cancel print jobs already stored in the print buffer.

Drag-and-drop Printing

Users of MarkVision for Windows 3.1 can simply drag and drop files they want to print onto the minimized MarkVision icon. MarkVision automatically starts the application associated with the file.

Dynamic Data Exchange (DDE)

Software developers writing DDE-enabled Windows applications can use DDE as a means of accessing printer information from MarkVision for Windows 3.1x. For example, Lexmark offers an application that transmits printer status alerts through a wireless messaging service to network administrators away from their workstations.

Security

MarkVision has access to the logon authority granted each LAN user within the network operating system. MarkVision honors this logon authority when granting access to MarkVision functions.

Dial Up Support (TCP/IP)

MarkVision for TCP/IP and MarkVision for UNIX Networks lets you use SLIP or PPP protocols to view and control network printers from a remote site.

Output Expander Naming

The operator panel menu item Output Bin has Bin 1, Bin 2, and Bin 3 as the values or names for the output expanders, but MarkVision lets you rename each to a special name. MarkVision also lets you rename the Standard Bin to a special name. Once the names are defined and the driver establishes bidirectional communication with the printer, the driver shows the names through MarkVision on a screen. You can then select an output expander by the name you defined.

Media Type Control

MarkVision lets you manipulate media type names to allow for personalized naming of media types. This is a separate function from the operator panel Custom Type x name that allows for a user-defined name.

Printer Password Access Security Control

MarkVision provides access to two new passwords in the printer. The passwords help in network environments without built-in security, such as TCP/IP. The network administrator assigns a

password to the printer to restrict users from printing or from having MarkVision access. This new security function does not override existing security functions on the network if they exist.

Uninstaller for MarkVision

This function lets you remove MarkVision from your personal computer if you need to do so.

Property Tag Support

MarkVision lets your company define valuable information about the printer, such as, a unique name, the name of the person using the printer, the printer location in a building, and so on. This information is specified in the Property Tag field and the information is stored in non-volatile random access memory (NVRAM). The information is accessible when you request a Printer Inventory through MarkVision.

Toner Level Sensing

The printer is able to determine the level of toner in the print cartridge. You can access this information through MarkVision. Toner level sensing is available with Windows 95, Windows NT 4.0, OS/2, and UNIX.

Menus (a New Remote Operator Panel)

MarkVision lets you view the menus and the menu items in a different way from the printer operator panel. It brings up dialog boxes for different menus. For instance, you may view all the menu items for the Paper Menu on one screen. Click to select the menu item you want. This selection method lets you set values for menu items faster than using the printer operator panel. This feature is only available in Windows 95, Windows NT 4.0, and OS/2.

MarkVision Online Help

Context-sensitive online Help is available from all MarkVision screens.

MarkVision for Windows 95 and MarkVision for Windows NT 4.0 include step-by-step procedures for many MarkVision functions. To view these procedures, select **Help** from the MarkVision **Printer Window** menu bar and click **Help Topics**.

MarkVision for OS/2 Warp and MarkVision for Macintosh also offer task-oriented information. The online Help in MarkVision for Macintosh includes full-color illustrations.

Toolkit

If you're using DOS or OS/2 2.x, install the Toolkit when you run the setup utility.

If you're using Windows 3.1, the Toolkit is included as part of the MarkVision utility. In MarkVision for Windows 95 and Windows NT 4.0, Toolkit functions are grouped under the Resource Management tab. MarkVision for OS/2 Warp, MarkVision for Macintosh, and MarkVision for UNIX Networks also offer the Toolkit functions, although they do not identify them as part of a "Toolkit" utility.

The OS/2 Toolkit lets you:

- Format optional flash memory and hard disk
- Download PostScript language programs and PCL 5 macros
- Download PostScript Type 1 format and PCL format bitmapped and scalable fonts
- View, file, and send printer commands

For more details about the Toolkit functions, refer to the README file included with the utilities and to the online Help.

Network Printer Utility

For information on network adapters and the Network Printer Utility, refer to the network adapter documentation and to the CD online documentation.

Getting Updated Drivers and Utilities

There are a number of ways you can get information about the latest Lexmark drivers and utilities. If you live outside the U.S. or Canada, refer to the README files included with the DOS, Windows 3.1, and OS/2 printer utilities for a listing of technical support resources. MarkVision for Windows 95 and Windows NT 4.0 includes similar information in its online Help.

Online Services

If you have access to an online service, you can download printer drivers from Lexmark 24 hours a day, 7 days a week. The addresses are:

- Internet server: ftp.lexmark.com
  (driver files are located at /pub/driver)
- World Wide Web (WWW): http://www.lexmark.com
- CompuServe: go lexmark

Automated FAX System

In the U.S. and Canada, you can get a list of available drivers by dialing the Lexmark Automated Fax System. The system is available 24 hours a day, 7 days a week.

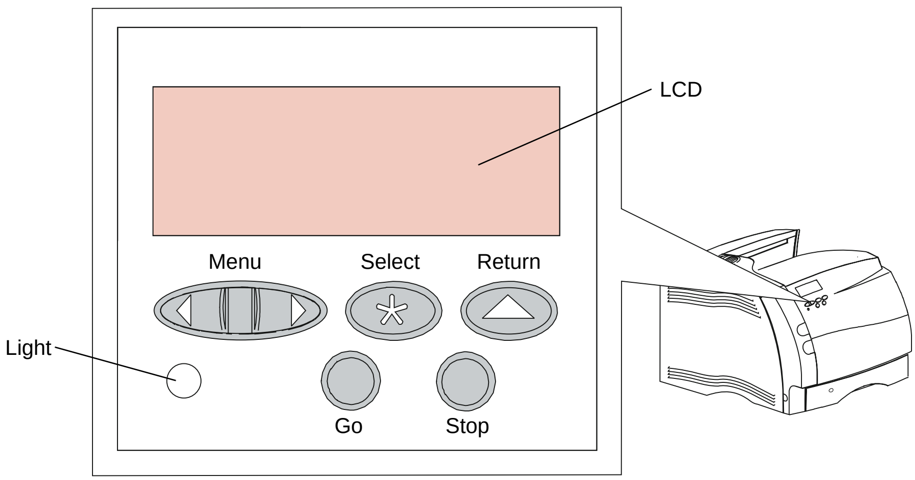
To access the Automated Fax System from the U.S. or Canada, call (606) 232-2380 from a touchtone phone and follow the voice prompts. You can request information on how to use the system, request a catalog of documents available, or choose a specific document you want sent to you. The system prompts you for the phone number of the fax machine that will receive the information.

Using Your Printer

Using the Operator Panel and Menus

Chapter 3

The operator panel has a 2-line by 16-character liquid crystal display (LCD), five buttons, and one indicator light.



Normally you only use the printer operator panel to check for messages when you have printer problems.

You make most changes to your printer settings through your software application. If there is a setting you cannot change from your application and printer driver, you can use the operator panel menus or MarkVision to change that setting.

Note: Changes made to printer settings from a software application override changes made from the operator panel.

You can also access the operator panel remotely from the MarkVision Windows Utility. The remote access to the operator panel lets you change printer menu settings at your computer, so you don't have to leave your workstation.

If you are familiar with using an operator panel similar to this, you may want to skip to "Overview of Printer Menus" on page 60.

Power Indicator Light

Light State	Meaning
Off	The printer is off.
On	The printer is on, but idle.
Flashing	The printer is on and is busy.

Operator Panel Buttons

Use the five operator panel buttons to change printer settings and respond to printer messages. Change printer settings by selecting items from the menus on the display (see "Using the Operator Panel to Change Printer Settings" on page 55).

Note: Buttons act upon the information displayed on the second line of the operator panel.

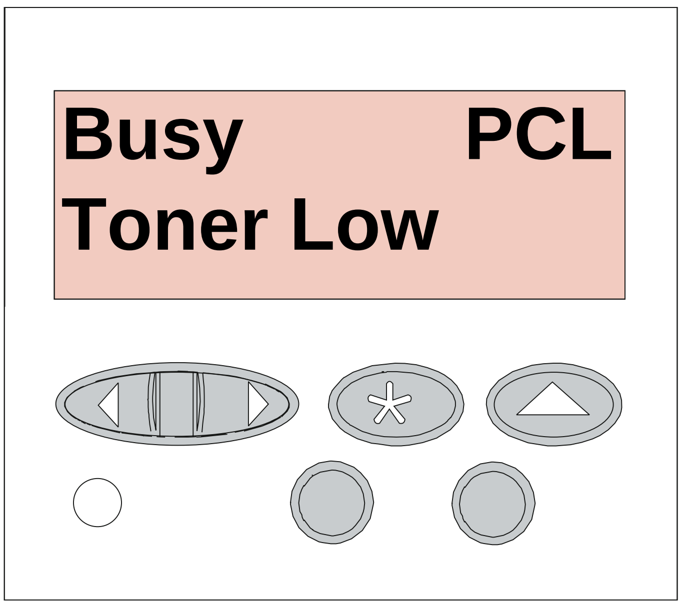
Button	Function
Go	Use the **Go** button to: • Return the printer to **Ready** status (**Ready** message). The printer must display **Ready** for jobs to print. The printer is in a ready to print state if it displays Power Saver. For more information, see "Printer Messages" on page 54. • Exit printer menus displayed on the operator panel. • Exit Power Saver. • Clear operator panel messages. Note: If you've changed printer settings from the operator panel menus, press **Go** before you send a job to print.
Menu> and **<Menu**	Each end of the button has a function. Press the **Menu>** or **<Menu** button: • At the **Ready** message, to take the printer out of the Ready state and enter the menus. • At the **Busy** message, to take the printer to the **JOB MENU**. • When **Not Ready** displays, to take the printer to the **Job Menu**. Press and hold the **Menu>** button to scroll forward or the **<Menu** button to scroll backward in the menu items that have numerical values, such as **Copies**. Release the button when the number you want is displayed.
Select	Press the **Select** button to: • Select the menu item shown on the second line of the display. Depending on the type of menu, this action: - Opens the menu and displays the first printer setting in the menu. - Opens the menu and displays the default setting. • Save the item displayed as the new default setting. The printer displays the **Saved** message and then returns to the menu item.
Return	Press the **Return** button to return to the previous menu level.
Stop	Press the **Stop** button when the printer is busy or waiting to temporarily stop all activity. The printer operator panel status message changes from **Busy** or **Waiting** to **Not Ready**. The printer returns to job activity when **Go** is pressed.

Printer Messages

The operator panel messages are in three groups:

- Status - gives information about the current state of the printer
- Attendance - indicates printer errors that you must resolve
- Service - indicates printer failures that may require servicing

For example, when the printer displays the **Ready** status message, it is ready for you to send a job to print. While it's printing a job, it displays a **Busy** message similar to the following one:



The **Busy** message identifies the printer language (PCL emulation) used for the print job in this example.

The printer status is shown on the first line of the display. The second line of the display shows messages that give more information about printer status.

The attendance messages help you solve printer problems. For example, if you left the upper front door open, the message **Close Door or Insert Cartridge** appears on the display:

Close Door or
Insert Cartridge

The service messages notify you of printer failures that may require a call for service.

See "Understanding Printer Messages" on page 177 for a complete listing of all the printer messages.

Using the Operator Panel to Change Printer Settings

From the operator panel, you can select menu items and associated values to run your print jobs successfully. You can also use the panel to alter the setup and operating environment of the printer. See "Operator Panel Menus" on page 58 for an explanation of all the menu items.

You can modify printer settings by:

- Selecting a setting from a list of values
- Changing an On / Off setting
- Changing a numerical setting

To select a new value as a setting:

1. **From a Ready status message, press Menu> or <Menu.** The menu names appear.
2. **Continue to press and release Menu> or <Menu until you reach the menu you need.** See "Operator Panel Menus" on page 58 for more information on specific menu items and values.

3 **Press Select to select the menu or menu item shown on the second line of the display.**

- If the selection is a menu, the menu is opened and the first printer setting in the menu is displayed.
- If the selection is a menu item, the default setting for the menu item is displayed. (The current user default setting has an asterisk (*) beside it.)

Each menu item has a list of valid values for the menu item. A value can be:

- a phrase or word to describe a setting
- a numerical value that can be changed
- an On or Off setting

4 **Press Menu> or <Menu to move to the value you need.**

5 **Press Select to select the value on the second line of the display.** An asterisk appears beside the value to indicate that it is now the user default setting. The display shows the new setting for one second and then clears and shows the word **Saved**. It then displays the previous list of menu items.

6 **Press Return to go back to previous menus.** Then, make additional menu selections to set new default settings. Press **Go** if this is the last printer setting to change.

User default settings remain in effect until you save new settings or restore the factory defaults. Settings you choose from your software application can also change or override the user default settings you select from the operator panel.

Example of Printing the Menu Settings

Follow the steps below to print a list of the current user default settings and installed printer options.

1 **Make sure the printer power is On (|) and the Ready status message appears on the display.**

2 **Press Menu> or <Menu to enter the menus.**

3 **Continue to press and release Menu> until you see TESTS MENU.**

4 **Press Select to show the list of menu items for the TESTS MENU.**

Continue to press and release **Menu>** until you see **Print Menus**.

5 **Press Select to select Print Menus.**

The message, **Printing Menu Settings,** is shown on the display and remains on the display until the page prints.

The page shows current settings for the menus and a list of installed options.

If an error message appears, see “Understanding Printer Messages” on page 177 for more information.

The printer returns to the **Ready** status message when the page or pages finish printing.

Operator Panel Menus

The printer has standard menus that let you configure the printer:

- Paper
- Finishing
- Tests
- Job
- Quality
- Setup
- PCL Emul
- PostScript
- Fax

PCL emulation is the default printer language.

Additional menus are displayed if a language is available for the model or is activated, and if options, network adapters, and attachments are installed. These menus include:

- Standard Parallel, Parallel Option 1, Parallel Option 2, and Parallel Option 3
- Standard Serial, Serial Option 1, Serial Option 2, and Serial Option 3
- Network Option 1, Network Option 2, and Network Option 3
- Infrared
- LocalTalk

The diagram on page 60 shows the menu items in each menu.

The rest of this chapter contains tables that list the menu items for each menu, the available values, and a description of the values for each value in a menu item. The values in each table are listed in the order they appear in the menu item.

Some of the menu items or values are displayed only if a specific option is installed on the printer. Other menu items or values may only be effective for a particular printer language. You can select these values at any time, but they only affect printer function when you use the specified printer language.

An asterisk (*) next to a value in the tables indicates the factory default setting. Factory defaults may differ for different countries.

Factory defaults are the function settings in effect the first time you turn your printer on. These remain in effect until you change them. Factory defaults are restored if you select the **Restore** value for the **Factory Defaults** menu item in the **TESTS MENU**. See Factory Defaults on page 79 for more information.

When you select a new setting from the operator panel, the asterisk moves next to the selected setting to identify it as the current user default.

User defaults are the settings you select for different printer functions and store in printer memory. Once stored, these settings remain active until new ones are stored or the factory defaults are restored.

See “Using the Operator Panel to Change Printer Settings” on page 55 for instructions on how to select a new setting.

Note: Be aware that settings you choose from your software application may override the settings you select from the operator panel.

Overview of Printer Menus

PAPER MENU
(page 61)
Paper Source
PAPER SIZE
PAPER TYPE
CUSTOM TYPES
Output Bin
Configure Bins
Substitute Size
Configure MP
Envelope Enhance
PAPER TEXTURE
PAPER WEIGHT

FINISHING
MENU (page 71)
Duplex
Duplex Bind
Copies
Blank Pages
Collation
Separator Sheets
Separator Source
Multipage Print
Multipage Order
Multipage View
Multipage Border

TESTS MENU
(page 78)
Quick Demo
Print Menus
Print Fonts
Print Directory
Print Demo
Factory Defaults
Format Flash
Defragment Flash
Format Disk
Job Acct Stat
Hex Trace

JOB MENU
(page 82)
Cancel Job
Reset Printer
Reset Active Bin
Print Buffer

QUALITY MENU
(page 85)
Print Resolution
Print Darkness
Toner Saver
PQET

SETUP MENU
(page 87)
Printer Language
Power Saver
Resource Save
Download Target
Print Timeout
Wait Timeout
Auto Continue
Jam Recovery
Page Protect
Print Area
Display Language
Alarm Control
Toner Alarm
Job Buffer Size
Job Accounting
Job Acct Limit

PCL EMUL MENU
(page 95)
Font Source
Font Name
Point Size
Pitch
Symbol Set
Orientation
Lines per Page
A4 Width
TRAY RENUMBER
Auto CR after LF
Auto LF after CR

POSTSCRIPT
MENU (page 100)
PictureGrade
Print PS Error
Font Priority

PARALLEL
MENU (page 102)
STD PARALLEL
PARALLEL OPT 1
PARALLEL OPT 2
PARALLEL OPT 3

Each menu contains the following items as the value list:

PCL SmartSwitch
PS SmartSwitch
NPA Mode
Parallel Buffer
Job Buffering
Advanced Status
Protocol
Honor Init
Parallel Mode 1
Parallel Mode 2

SERIAL MENU
(page 106)
STANDARD SERIAL
SERIAL OPTION 1
SERIAL OPTION 2
SERIAL OPTION 3

Each menu contains the following items as the value list:

PCL SmartSwitch
PS SmartSwitch
NPA Mode
Serial Buffer
Job Buffering
RS-232/RS-422
RS-422 Polarity
Serial Protocol
Robust XON
Baud
Data Bits
Parity
Honor DSR

NETWORK MENU
(page 111)
NETWORK OPTION 1
NETWORK OPTION 2
NETWORK OPTION 3

Each menu contains the following items as the value list:

PCL SmartSwitch
PS SmartSwitch
NPA Mode
Network Buffer
Job Buffering
NETWORK X SETUP

INFRARED MENU
(page 113)
Infrared Port
PCL SmartSwitch
PS SmartSwitch
NPA Mode
Infrared Buffer
Job Buffering
Window Size
Transmit Delay
Max Baud Rate

LOCALTALK MENU
(page 116)
LocalTalk Port
PCL SmartSwitch
PS SmartSwitch
NPA Mode
LocalTalk Buffer
Job Buffering
NPA Hosts
LocalTalk Name
LocalTalk Addr
LocalTalk Zone

FAX MENU
(page 119)
Fax Port
Fax Baud
Fax Data Bits
Fax Parity
Fax Buffer

Menu items in *italics* only appear on the display if the corresponding option is installed. For all menus:

- Press **Go** to return to **Ready**.
- Press **Return** to back up to the previous menu level.

Paper Menu

Paper Menu Selections

Menu Item	Values and Functions of the Menu Items
Paper Source	Tray 1* Tray 2 Tray 3 Tray 4 Tray 5 MP Feeder (available with the multipurpose feeder) Env Feeder (available if the *optional* envelope feeder is *installed*) Manual Paper (available with the multipurpose feeder) Manual Env (available with the multipurpose feeder) The Paper Source setting identifies the default paper source. Note: Only installed paper sources are displayed. See “Paper Sources” on page 140 for information on how many sources your printer model may have. If your printer model is configured with a multipurpose feeder, the **Manual Paper** and **Manual Env** sources are available for selection. These sources are used when manually feeding envelopes or other print material. The multipurpose feeder may also be selected as the default paper source. To make it available for selection, the multipurpose feeder must be configured as a **Cassette**. To configure the multipurpose feeder as a **Cassette**, set the **Configure MP** menu item to **Cassette**. See Configure MP on page 68 for more information. If **Paper Source** or **Separator Source** is set to **MP Feeder**, when **Configure MP** is changed to **Manual** or **First**, they are changed to **Tray 1**. If you are using the same size and type print material in all the paper sources, the trays are automatically linked. See “Tray Linking” on page 145 for more information.
*** Factory default**	

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
PAPER SIZE	• Tray x Size (x represents a tray number from 1 to 5, but only installed paper sources are displayed.) - A4* (Country specific) - A5 - JIS B5 - Letter* (Country specific) - Legal - Executive - Universal • MP Feeder Size (available with the multipurpose feeder) - same paper sizes as Tray x Size, except the Universal size is different - same envelope sizes as Env Feeder • Env Feeder Size (available if the *optional* envelope feeder is *installed*) - 7 ¾ Envelope - 9 Envelope - 10 Envelope* (Country specific) - DL Envelope* (Country specific) - C5 Envelope - B5 Envelope - Other Envelope • Manual Pap Size (same paper sizes as Tray x Size) • Manual Env Size (same envelope sizes as Env Feeder)
*** Factory default**	

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
PAPER SIZE	The PAPER SIZE setting identifies the default formatting size for each paper source. It is important to select the correct paper size from the menu when using paper sources. Some paper sources have size sensing. This means the printer can automatically determine the size of print materials installed in the source. The PAPER SIZE setting for size sensing sources cannot be modified through the operator panel. You must install the size you want in the source. Note: For paper and envelope sources without size sensing, the factory default is country specific. For sources with size sensing, the factory default is the size that is installed in the source. To determine if a source has size sensing, see “Paper Sources” on page 140. If your printer model is configured with a multipurpose feeder, the **Manual Pap Size** and **Manual Env Size** settings are available for selection. These sizes are used when manually feeding envelopes or other print material. **MP Feeder Size** is also available and displayed on the operator panel when the multipurpose feeder is present on the printer model and **Configure MP** is set to **Cassette**. To configure the multipurpose feeder as a **Cassette**, set the **Configure MP** menu item to **Cassette**. See Configure MP on page 68 for more information. See “Paper Size Specifications” on page 144 and “Envelope Size Specifications” on page 145 for more information. Universal size refers to any size that is not considered a standard size.
*** Factory default**	

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
PAPER TYPE	• Tray x Type (x represents a tray number from 1 to 5, but only installed paper sources are displayed.) - Plain Paper* (Factory default for Tray 1 *only*) - Card Stock - Transparency - Labels - Bond - Letterhead - Preprinted - Colored Paper - Custom Type 1 - Custom Type 2* (Factory default for Tray 2 *only*) - Custom Type 3* (Factory default for Tray 3 *only*) - Custom Type 4* (Factory default for Tray 4 *only*) - Custom Type 5* (Factory default for Tray 5 *only*) - Custom Type 6 • MP Feeder Type (available with the multipurpose feeder) - Plain Paper - Card Stock - Transparency - Labels - Bond - Envelope - Letterhead - Preprinted - Colored Paper - Custom Type 1 - Custom Type 2 - Custom Type 3 - Custom Type 4 - Custom Type 5 - Custom Type 6*
*** Factory default**	

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
PAPER TYPE	• Env Feeder Type (available if the *optional* envelope feeder is *installed)* - Envelope* - Custom Type 1 - Custom Type 2 - Custom Type 3 - Custom Type 4 - Custom Type 5 - Custom Type 6 • Manual Paper Type (same paper types as Tray x Type) • Manual Env Type (same paper types as Env Feeder Type) The PAPER TYPE setting lets you specify the type of print material installed in each source. The PAPER TYPE setting is used by the printer in the following ways: • Enables the printer to optimize print quality for the specified print material. • Enables you to select paper sources through your software application by selecting only a type and size. A source selection is unnecessary. • Enables the printer to automatically link paper sources. Any sources that contain the same type and size of print material are automatically linked by the printer. If your printer model is configured with a multipurpose feeder, the **Manual Paper Type** and **Manual Env Type** are available for selection. These types are used when manually feeding envelopes or other print material. **MP Feeder Type** is also available and displayed on the operator panel when the multipurpose feeder is present on the printer model and **Configure MP** is set to **Cassette**. To configure the multipurpose feeder as a **Cassette**, set the **Configure MP** menu item to **Cassette**. See Configure MP on page 68 for more information. Custom Type 1 through 6 refers to names you defined for special types of print materials you use. You set the names through a utility, such as MarkVision. For example, if you are using three different letterheads for different professionals in your business, you could define a custom type name based on the name on their letterhead paper. For more information on setting the Custom Type names, see CUSTOM TYPES on page 66. Note: If you are using different print material in the paper sources (trays), each source with a different print material must have the **PAPER TYPE** set to a unique value to disable the automatic linking feature.
*** Factory default**	

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
PAPER TYPE	For example, if you have an Optra S 2455 with two optional trays attached, and you have 215.9 x 279.4 mm (8.5 x 11 in.) size plain paper, labels, transparencies, letterhead, and colored paper loaded into Trays 1 through 5 respectively, you need to set the paper type for each source. Otherwise, if one tray becomes empty, the printer selects print material from another tray since the printer sees the trays as linked. This might cause a one-page letter to print on a sheet of labels or on a transparency.
CUSTOM TYPES	Custom Type x (x represents a custom type from 1 to 6) - Paper* - Card Stock - Transparency - Labels - Envelope The CUSTOM TYPES setting identifies the kind of print material used for each of the Custom Types 1 - 6 available in the **PAPER TYPE** menu item. This print material designation optimizes print quality settings when you select print material from a source when the type is set to **Custom Type x**. If a user-defined name is available, this name is displayed instead of Custom Type x, where x represents a number 1 through 6. The user-defined name is truncated to 14 characters.
Output Bin	Standard Bin* Bin 1 Bin 2 Bin 3 The Output Bin setting identifies the default exit for printed material. The standard bin is located on top of the printer. Each additional bin, represented by numbers, is available for each output option installed. If a user-defined bin name is assigned to an output option, the name is used instead of the bin number to designate the output option. For information on how many output bins your printer model may have, see “Paper Exits (Output Bins)” on page 153.
*** Factory default**	

Using the Operator Panel and Menus

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Configure Bins	Mailbox* Link Link Optional The **Configure Bins** menu item is only available if one or more output options are installed. The **Mailbox** setting allows the Standard Bin and any output options to be selected individually. Printed material is placed in the output bin selected by the print job. If a print job does not specify the output bin, the printed material goes to the default output bin. See Output Bin on page 66 for more information. When an output bin is full, the **Remove Paper** message is displayed and the printer stops printing until the printed material is removed from the output bin. The **Link** setting allows for bin linking. Bin linking causes all the output bins (standard bin and output options) to be linked together as though they are one large bin. The printer fills the Standard Bin first. When it is full, the printer starts filling the first output option. As each additional output option is filled, the printer switches to the next installed output option. When the standard bin and all the output options are full, the printer issues the **Remove Paper All Output Bins** message. The **Link Optional** setting causes all output options to be linked together as though they are one large bin, while leaving the Standard Bin individually addressable. The printer fills the default output bin first. When it is full, the printer switches to the next installed output option. When all output options are full, the printer issues the **Remove Paper All Output Bins** message.
Substitute Size	Off* Letter / A4 The **Letter/A4** setting lets the printer automatically print A4 jobs on letter size paper and letter jobs on A4 size paper, if the requested size is not currently installed. Note: When a size substitution is performed, the page image is automatically clipped to fit on the substituted size, possibly resulting in data loss.
*** Factory default**	

Paper Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Envelope Enhance	Off On* Use **Envelope Enhance** to minimize envelope wrinkling. With **Envelope Enhance** set **On**, you may hear a tapping sound as the envelopes are printing. We recommend that you leave **Envelope Enhance** set **On** unless the tapping sound is too loud for your work area. To avoid this sound, set **Envelope Enhance** to **Off**. Print a few envelopes. If the quality of print is acceptable, leave **Envelope Enhance** set **Off**. If envelopes crease or wrinkle, set **Envelope Enhance** to **On**.
Configure MP	Cassette* Manual First When the multipurpose feeder is set to **Cassette**, print material continuously feeds from this source, just like you were using one of the paper trays. When **Manual** is selected, this source manually feeds single sheets. If **First** is selected, print material in the multipurpose feeder is always used for printing until the multipurpose feeder is empty. This lets the printer override the paper size, source and type request in a print job. If the multipurpose feeder is empty when the print job starts printing, the paper size, source and type specified by the print job is used. When **First** is selected, the multipurpose feeder selection for paper source, size and type are removed from the paper menu. These selections are restored when the multipurpose feeder is set to **Cassette**.
*** Factory default**	

Paper Menu Selections (Continued)

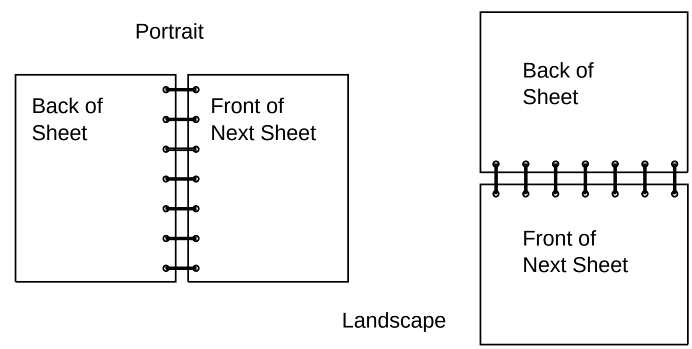
Menu Item	Values and Functions of the Menu Items
PAPER TEXTURE	• Plain Texture • Card Stock Text • Trnsprncy Text • Labels Texture • Bond Texture • Envelope Texture • Ltrhead Texture • Preprint Texture • Colored Texture • Custom 1 Texture • Custom 2 Texture • Custom 3 Texture • Custom 4 Texture • Custom 5 Texture • Custom 6 Texture Each of the above menu items support the following three values as a second menu: - Smooth - Normal* - Rough Note: **Rough** is the factory default for Bond Texture paper. If you have print quality problems due to the texture of a paper, use the **PAPER TEXTURE** menu item to set the texture for any defined **PAPER TYPE**, including the custom types. If a user-defined name is available, this name is displayed instead of **Custom x Texture**, where x represents a number 1 through 6. The user-defined name is truncated to 14 characters.
*** Factory default**	

Paper Menu Selections (Continued)

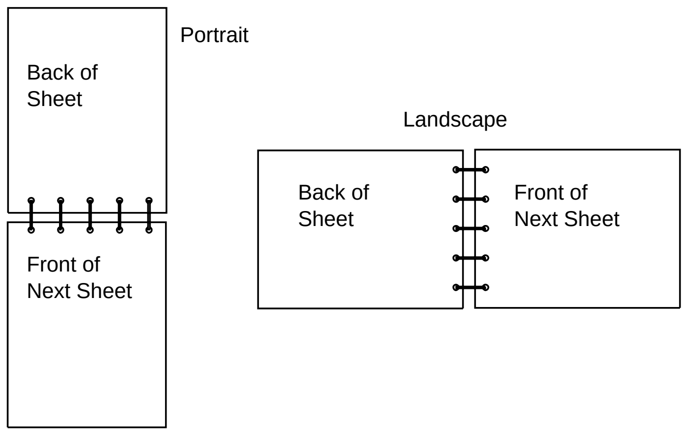
Menu Item	Values and Functions of the Menu Items
PAPER WEIGHT	• Plain Weight • CardStock Weight • Trnsprncy Weight • Labels Weight • Bond Weight • Envelope Weight • Ltrhead Weight • Preprint Weight • Colored Weight • Custom 1 Weight • Custom 2 Weight • Custom 3 Weight • Custom 4 Weight • Custom 5 Weight • Custom 6 Weight Each of the above menu items support the following three values as a second menu: - Light - Normal* - Heavy Use the PAPER WEIGHT menu item to set the paper weight for each defined PAPER TYPE including the custom types. If a user-defined name is available, this name is displayed instead of **Custom x Weight**, where x represents a number 1 through 6. The user-defined name is truncated to 14 characters. See page 125 for more information on paper weights.
*** Factory default**	

Finishing Menu

Finishing Menu Selections

Menu Item	Values and Functions of the Menu Items
Duplex	Off* On The Duplex menu item is available only if the duplex option is installed. When **Duplex** is selected, the printer prints on both sides of the paper. With **Duplex** set to **Off**, the printer prints only on one side of the paper. You can print duplexed pages for certain size papers from any paper source except the Envelope Feeder.
Duplex Bind	Long Edge* Short Edge The Duplex Bind menu item is available only if the Duplex Option is installed. Duplex bind refers to the way pages are bound or connected and how the printing on the back (even-numbered) pages is oriented in relation to the printing on the front (odd-numbered) pages. Long edge means pages are bound along the long edge of the page (the left edge for portrait and the top edge for landscape). For example, the pages of this book were printed using long-edge binding and portrait orientation. 
*** Factory default**	

Finishing Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Duplex Bind	Short edge means the pages are bound along the short edge (for example, the top and bottom of this page). 
Copies	1 to 999 (1*) The **Copies** setting changes the number of copies printed for each page. For example, if you send three pages to print and set **Copies** to 2, the printer prints page 1, page 1, page 2, page 2, page 3, page 3.
Blank Pages	Do Not Print* Print The **Blank Pages** setting is used to specify whether or not the printer includes blank pages with print jobs. When **Blank Pages** is set to **Do Not Print**, paper will be saved by not printing blank pages.
*** Factory default**	

Finishing Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Collation	Off* On When **Collation** is **Off**, the printer prints each page of a job the number of times as specified by the **Copies** setting. For example, if you send a three-page job to print and set **Copies** to 2, the printer prints page 1, page 1, page 2, page 2, page 3, page 3. When **Collation** is **On**, the printer prints each job again, the number of times as specified in the **Copies** setting. For example, if you send a three-page job to print and set **Copies** to 2, the printer prints page 1, page 2, page 3, page 1, page 2, page 3. Many applications collate documents by sending the file once for each copy requested. As a result, the printer must process the print job once for each copy. This requires additional time since the printer must process the same pages over again. By using **Collation**, the printer processes the file only once, saves this file in the printer memory, and prints the multiple copies. This saves processing time for the printer and application, and overall printing time may be reduced. However, your software application must recognize this printer collation feature and not send the print job multiple times to the printer. Your application must also let you specify the number of copies needed or let you use the printer default setting for **Copies**. **Collation** can be selected from the operator panel or from the printer driver. For best results, in the printer driver select *collated* and set the number of copies to one. In your application select *uncollated* (if the option is available) and the number of copies you want. If the job is complex or exceeds the memory capacity of your printer, you may receive a **37 Insufficient Collation Area** message. Press **Go** to clear the message. The printer collates the remaining pages in memory. If you reset the printer, the printer stops printing the job.
*** Factory default**	

Finishing Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Separator Sheets	None* Between Copies Between Jobs Between Pages Your printer can insert blank separator pages between your printed pages or documents (both collated and non-collated). If you leave **Separator Sheets** in the default setting of **None**, no separator pages are inserted. Select **Between Copies** for multiple copy jobs. If **Collation** is **Off**, a blank page is inserted between sets of each printed page. If **Collation** is **On**, a blank page is inserted between each print job. If you select **Between Jobs**, a blank page is inserted after each print job. This may be helpful when there is more than one person using the printer. A blank page is added after each page when you select **Between Pages**. This selection is useful when you want to separate transparencies.
Separator Source	Tray 1* Tray 2 Tray 3 Tray 4 Tray 5 MP Feeder (available with the multipurpose feeder) Env Feeder (available if the *optional* envelope feeder is *installed*) Note: Only installed paper sources are displayed on the operator panel. See “Paper Sources” on page 140 to determine the number of sources you may have based on your printer model. If your printer model is configured with a multipurpose feeder, the **MP Feeder** source is available for selection. The multipurpose feeder may be selected as the default paper separator source. To make it available for selection, the multipurpose feeder must be configured as a **Cassette**. To configure the multipurpose feeder as a **Cassette**, set the **Configure MP** menu item to **Cassette**. If **Paper Source** or **Separator Source** is set to **MP Feeder**, when **Configure MP** is changed to **Manual** or **First**, then they are changed to **Tray 1**. See Configure MP on page 68 for more information. When you are using separator sheets, select **Separator Source** and then the paper source containing the separator sheets. You can select **Tray 1** through **Tray 5**, **MP Feeder**, or **Env Feeder** depending on the number of options installed or the printer model you have. See “Paper Sources” on page 140 for information on available paper sources for your printer model.
*** Factory default**	

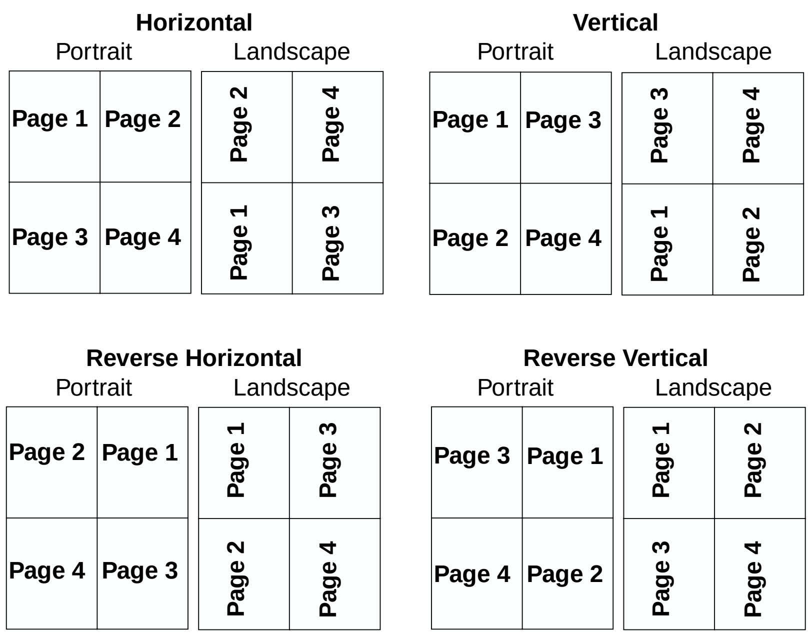
Finishing Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Multipage Print	Off* 2-Up 3-Up 4-Up 6-Up 9-Up 12-Up 16-Up Use the **Multipage Print** (N-up) setting to print multiple page images on a single page. For example, 2-Up means two page images are printed on one page, 3-up means three page images are printed on one page, and so forth. The printer uses the **Multipage Order**, **Multipage View** and **Multipage Border** settings to determine the order and orientation of the page images and whether a border is printed around each page image. Note: Printer setting changes within a print job may affect the results you get when using **Multipage Print**.
*** Factory default**	

Finishing Menu Selections (Continued)

<table>
<tr><th>Menu Item</th><th>Values and Functions of the Menu Items</th></tr>
<tr><td>Multipage Order</td><td>Horizontal*
Vertical
Reverse Horizontal
Reverse Vertical

The **Multipage Order** setting determines the positioning of multiple page images on pages printed using **Multipage Print**. You may choose one of four different orders. The positioning of page images depends on whether they are sent to the printer as portrait or landscape images. The examples below show the result of using each **Multipage Order** setting on a 4-up print job:


</td></tr>
<tr><td colspan="2">*** Factory default**</td></tr>
</table>

Finishing Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Multipage View	Auto* Long Edge Short Edge Use the **Multipage View** setting to select the orientation of the printed page with respect to the page images during **Multipage Print**. The **Auto** setting allows the printer to choose between portrait and landscape positioning. The **Long Edge** setting positions the printed page for reading assuming the long edge is the top of the page. The **Short Edge** setting positions the printed page for reading assuming the short edge is the top of the page. Note: For PostScript Level 2 emulation print jobs, the Auto setting is always in Portrait orientation.
Multipage Border	None* Solid Use the **Multipage Border** setting to specify whether a border is printed around each page image during **Multipage Print**.
*** Factory default**	

Tests Menu

Tests Menu Selections

Menu Item	Values and Functions of the Menu Items
Quick Demo	Select this menu item to print the Lexmark demo page.
Print Menus	Press **Select** to print this test page. A list of the user default settings, the installed options, and the amount of printer memory available prints. This list also shows you the order of menu items.
Print Fonts	PCL Fonts PS 2 Fonts Select **Print Fonts** to print a font sample that shows all the fonts currently available in the selected printer language. **PS 2 Fonts** for PostScript Level 2 fonts is only displayed if the PostScript emulator is available. For more information, see "Printing a Font Sample List" on page 339.
Print Directory	Press **Select** to print this test page. If you have a Flash Memory Option or Hard Disk with Adapter Option installed, select **Print Directory** for a list of all the data stored on the options. This menu item is unavailable unless one of the options is installed. Refer to the *Technical Reference* for details.
Print Demo	Demo Page (resident demonstration page) List of other demo files on flash or disk Select **Print Demo** to see a list of the demo files stored in your printer. Select **Demo Page** to print the standard demonstration page. You can also select a list of the demo files on flash and disk. Refer to the *Technical Reference* for more information.
*** Factory default**	

Tests Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Factory Defaults	Restore Do Not Restore When you restore the factory default settings: • All downloaded resources (fonts, macros, and so on) in printer memory (RAM) are deleted. (Resources residing in the Flash Memory Option or Hard Disk with Adapter Option are unaffected.) • All menu settings are returned to the factory default values except: - **Display Language** (SETUP MENU) which is the operator panel display language - All settings in the PARALLEL MENU, SERIAL MENU, NETWORK MENU, INFRARED MENU, and LOCALTALK MENU. To determine the factory default paper size value, see PAPER SIZE on page 62.
Format Flash	Yes No The **Format Flash** menu item does not display if the installed option is defective or is Read / Write or Write protected. **51 Defective Flash** displays during printer power on. See **51 Defective Flash** on page 186 for more information. Formatting deletes all resources stored in flash memory and prepares the flash memory card to receive new resources. **Warning:** If you select **Format Flash** and then press **Go,** any data stored in flash memory is lost. *Do not turn off the printer when the flash is formatting.*
*** Factory default**	

Tests Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Defragment Flash	Yes No The **Defragment Flash** menu item does not display if the installed option is defective or is Read / Write or Write protected. **51 Defective Flash** displays during printer power on. See **51 Defective Flash** on page 186 for more information. Defragmenting copies all undeleted resources stored in flash memory to printer memory and then reformats the flash memory. When the format operation is complete, the undeleted resources are loaded back into flash memory. **37 Insufficient Defrag Memory** displays if printer memory is too full to perform the Flash Memory Defragment operation. See **37 Insufficient Defrag Memory** on page 185 **Warning:** *Do not turn off the printer when the flash is defragmenting.*
Format Disk	Yes No The **Format Disk** menu item does not display if the installed option is defective or is Read / Write or Write protected. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Formatting deletes all resources stored on the hard disk and prepares the hard disk to receive new resources. **Format Disk** is not displayed if Job Buffer Size is set to 100%. **Warning:** If you select **Format Disk** and then press **Go**, any data stored on the hard disk is lost. *Do not turn off the printer when the hard disk is formatting.*
*** Factory default**	

Tests Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Job Acct Stat	Print Clear The **Job Acct Stat** menu item does not display if the hard disk option is defective or is Read / Write or Write protected. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Select **Print** to print a job accounting statistics listing. See **Job Accounting** on page 94 for more information on Job Accounting Statistics. Select **ClearJob Acct Stat** to clear all job accounting statistics data stored on the hard disk. Note: The job accounting statistics data is cleared without warning once this operation is selected.
Hex Trace	Press **Select** to enter Hex Trace mode. Select **Hex Trace** to isolate the source of a print job problem. With Hex Trace selected, all data sent to the printer is printed in hexadecimal and character representation. Control codes are not executed. To exit **Hex Trace**, turn the printer Off (O) or perform a reset. To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
*** Factory default**	

Job Menu

Note: The printer prohibits entry into the **Job Menu** if no function is available when it is accessed.

Job Menu Selections

Menu Item	Values and Functions of the Menu Items
Cancel Job	Press **Select** to cancel the current print job. **Cancel Job** displays only when the printer is processing a print job.
Reset Printer	Press **Select** to reset the printer. When you select **Reset Printer**, the printer resets to the user defaults that you selected. All downloaded resources (fonts, macros, and so on) in printer memory (RAM) are deleted. All data on the currently selected host interface is deleted from the interface link buffer. Note: Before performing an operator panel reset, exit the software application you are using.
*** Factory default**	

Job Menu Selections (Continued)

<table>
<tr><th>Menu Item</th><th>Values and Functions of the Menu Items</th></tr>
<tr><td>Reset Active Bin</td><td>The Reset Active Bin menu item is displayed if the following conditions exist:
• The Configure Bins menu item in the Paper Menu is set to either Mailbox, Link or Link Optional mode. See page 67 or page 291 for more information on configuring bins.
Note: If set to Mailbox, two or more bins must be grouped by assigning them the same bin name.
• The printer displays the Busy or Waiting status message.
• Menu> is pressed to display the Job Menu.

When bins are linked together the printer puts paper into them in a certain sequence until all the bins are full. If paper is removed from the linked bins between print jobs, the printer sends subsequent jobs to the bin that last received paper (active bin). Reset Active Bin instructs the printer to send subsequent print jobs to the first bin in the sequence of linked bins instead of resuming with the bin that was current when paper was removed. This is useful, for instance, if you want to send a large print job to a set of linked bins and want to make sure it holds the entire job.
Note: The Reset Active Bin operation has no effect if the selected bins are either full or nearly full.

Depending on the value selected in the Configure Bins menu item, the Reset Active Bin menu item will perform one of the following operations:

Configure Bins set to Mailbox:
The value list consists of names assigned to groups of linked bins. To reset the active bin, press Menu> until the grouped bin name you want is displayed. Press Select to reset the active bin for that group.

Configure Bins set to Link:
No value list is displayed. When the Reset Active Bin menu item is displayed, press Select to reset the active bin.

Configure Bins set to Link optional:
No value list is displayed. When the Reset Active Bin menu item is displayed, press Select to reset the active bin. The Reset Active Bin operation has no effect on the Standard bin.</td></tr>
<tr><td colspan="2">* Factory default</td></tr>
</table>

Job Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Print Buffer	Press **Select** to print any data stored in the print buffer. The menu item is only displayed when the **Waiting** message is displayed. This occurs if an incomplete job is sent to the printer or if an ASCII job is being printed. A print screen sent from your host computer or copying a DOS file are examples.
*** Factory default**	

Quality Menu

Use the following menu items to adjust the print quality for your specific printing needs. See “Enhancing Print Quality” on page 341 for more information on print quality settings.

Quality Menu Selections

Menu Item	Values and Functions of the Menu Items
Print Resolution	300 dpi 600 dpi* 1200 Image Q 1200 dpi The **Print Resolution** setting defines the number of dots printed per inch (dpi). The higher the setting, the sharper the clarity of printed characters and graphics. See “Print Resolution” on page 345. Select **1200 Image Q** for 1200 Image Quality. See “Print Quality Settings” on page 344 and “1200 Image Quality” on page 345 for more information.
Print Darkness	Lightest Lighter Normal* Darker Darkest You can use the Print Darkness menu item to lighten or darken the image appearance in your print jobs or to preserve your toner supply. Selecting **Normal** should satisfy most of your printing requirements. If you want finer line width, higher definition in graphics, and lighter gray scale images, set Print Darkness to **Lighter**. Use the **Lightest** value to further reduce image darkness and to preserve the toner supply. If you want a bolder line width, emphasis in graphics, or darker gray scale images, set Print Darkness to **Darker**. Use the **Darkest** value to emphasize line width, produce the boldest text, and the darkest images. See “Print Darkness” on page 345 for information.
*** Factory Default**	

Quality Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Toner Saver	Off* On To get the most from your toner supply, set **Toner Saver** to **On**. If you set Toner Saver to On, print quality may be reduced. The level of Toner Saver may be adjusted by using the Print Darkness settings when the print resolution is set to 300 dpi or 600 dpi. See “Toner Saver” on page 346 for more information.
PQET	Off On* Some printed characters can appear to have jagged or uneven edges. Set Print Quality Enhancement Technology (**PQET**) **On** to improve the print quality of your text and make the characters appear smoother. PQET is ignored when the print resolution is set to 1200 dpi or 1200 Image Q. See “PQET” on page 346 for more information.
*** Factory Default**	

Setup Menu

Setup Menu Selections

Menu Item	Values and Functions of the Menu Items
Printer Language	PCL Emulation* PS 2 Emulation The printer language defines how the computer communicates with the printer. Your computer uses printer languages to send print data to the printer, such as PCL emulation and PostScript Level 2 emulation. You can select one as the default printer language. However, setting one as the default does not restrict the software application from sending print jobs that use the other printer language.
Power Saver	Disabled 1 to 120 (20*) The Power Saver menu item lets you reduce power usage when the printer is idle. The **Power Saver** setting determines the length of time the printer waits after a job is printed before it goes to a reduced power state. Press **Go** to take the printer out of Power Saver. If your printer is used constantly, select **Disabled** which keeps the printer ready to print with the minimum warm-up time. This uses more energy to keep the printer warm and ready to print. If your printer is in an environment where it shares an electrical circuit with room lighting and you notice lights flickering, you may set **Power Saver** to **1**, so the printer goes to Power Saver mode one minute after the end of the print job. This uses much less energy, but requires more warm-up time for the printer. If you want a balance between energy consumption and keeping the printer ready to print quickly, select a Power Saver time between 1 to 120 minutes.
*** Factory Default**	

Setup Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Resource Save	Off* On The Resource Save setting determines what the printer does with downloaded resources, such as fonts and macros, if it receives a job that requires more memory than is available. If **Resource Save** is **On**, the printer retains all permanent downloaded resources, such as fonts and macros, for all printer languages during language changes and printer resets. If the printer runs out of memory, **38 Memory Full** appears on the display. If **Resource Save** is **Off**, the printer retains permanent downloaded resources only until memory is needed. Then it deletes those resources stored for the inactive printer language.
Download Target	RAM* Flash Disk The **Download Target** menu item does not display if the installed Flash Memory Option or Hard Disk with Adapter Option are defective or Read / Write or Write protected. **51 Defective Flash** or **61 Defective Disk** displays during printer power on. See **51 Defective Flash** on page 186 or **61 Defective Disk** on page 189 for more information. Also, **Disk** is not displayed for **Download Target** if **Job Buffer Size** is set to 100%. If the options are not installed, the menu item is not displayed and all downloaded resources, such as fonts and macros, are automatically stored in printer memory (**RAM**). The Download Target menu item specifies the storage location for downloaded resources. Storing downloaded resources in flash memory or hard disk is permanent storage rather than the temporary storage that RAM provides. You can add resources to flash memory or to the hard disk until the option is full. Use your software application or the printer Toolkit to download resources to the printer.
*** Factory Default**	

Setup Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Print Timeout	Disabled 1 to 255 (90*) The Print Timeout setting determines the time (from 1 to 255 seconds) the printer waits before printing the last page of a print job that does not end with a command to print the page. When a print timeout occurs, the printer prints the page in the print buffer. Turn Print Timeout off by selecting **Disabled**. When Print Timeout is disabled, the printer does not print the last page of a print job until one of the following occurs: • The printer receives enough information to fill the page. • The printer receives a Form Feed command. • You select **Print Buffer** from the **JOB MENU**. See page 82 for more information. The print timeout counter does not start until the printer issues the **Waiting** message on the operator panel.
Wait Timeout	Disabled 15 ... 65535 (40*) The Wait Timeout setting determines the amount of time in seconds the printer waits to receive additional bytes of data from the computer. When this timeout expires, the print job is canceled. Wait Timeout is only available when using PostScript Level 2 emulation. The setting has no effect on PCL emulation print jobs. You can set **Wait Timeout** off by selecting **Disabled**.
*** Factory Default**	

Setup Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Auto Continue	Disabled* 5 ... 255 Set **Auto Continue** to a value between 5 seconds and 255 seconds to have the printer continue running after it detects one of the following errors: 34 Short Paper 35 Res Save Off Deficient Memory 36 Resolution Reduced 37 Insufficient Collation Area 37 Insufficient Defrag Memory 38 Memory Full 39 Complex Page 51 Defective Flash 52 Flash Full 53 Unformatted Flash 54 Standard Serial Error 54 Serial Option x Error 54 Parallel Error 54 Std Par ENA Connection Lost 54 Par x ENA Connection Lost 56 Standard Serial Disabled 56 Std Parallel Port Disabled 56 Parallel Port x Disabled 61 Defective Disk 62 Disk Full 63 Unformatted Disk 80 Scheduled Maintenance Print Jobs on Disk? If one of these errors occurs and **Auto Continue** is **Disabled**, the printer stops and waits for operator intervention. When **Auto Continue** is set to a value for seconds, the printer waits for this length of time and then automatically resumes processing as if you had pressed **Go**. This setting is also used as a timer. After an inactive period in the menus, the printer automatically exits the menus as if you had pressed **Go**.
*** Factory Default**	

Setup Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Jam Recovery	On Off Auto* When **Jam Recovery** is set **Off**, the printer does not reprint a page that has jammed. When **Jam Recovery** is set **On**, the printer keeps the image for a printed page until the printer signals that the page has successfully exited the printer. The printer reprints all jammed pages. If **Jam Recovery** is set to **Auto**, the printer keeps the image and reprints the page unless the memory required to hold the page is needed for other printer tasks.
Page Protect	Off* On It may be helpful to set **Page Protect** to **On** if you are having trouble getting a page to print properly because of complex page errors. If you still cannot get the page to print, your printer may not have enough memory to process the page. You may have to reduce the size and number of fonts on the page, or increase the memory. For most print jobs, you do not need to set Page Protect On. When Page Protect is On, printing may be slowed.
Print Area	Normal* Fit to Page Whole Page This printer setting lets you modify the PCL formatting area and the printer physical print area.
*** Factory Default**	

Setup Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Display Language (Default set by country)	English French German Italian Spanish Danish Norwegian Dutch Swedish Portuguese Finnish Japanese The **Display Language** setting determines the language of the text that appears on the operator panel display.
Alarm Control	Off Single* Continuous If you want the alarm to sound any time the printer requires intervention, select **Single** or **Continuous.** If you do not want the alarm to sound, select **Off**.
Toner Alarm	Off* Single Continuous The **Toner Alarm** setting lets you set the printer to stop printing when a toner low condition occurs. If you select **Single** or **Continuous**, the printer stops printing, displays **88 Toner Low**, and sounds the alarm. If you select **Off**, the printer displays **Toner Low** and continues printing.
*** Factory Default**	

Setup Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Job Buffer Size	Disabled* 10 ... 100 Job buffering lets you delay processing of a print job. The job is temporarily stored on an optional hard disk before being printed. This usually frees the host computer during the actual printing of a print job. The **Job Buffer Size** menu item lets you select the amount of hard disk space allocated to job buffering for all ports that have job buffering set On. The **Job Buffer Size** menu item does not display if the installed option is defective or is Read / Write or Write protected. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. **Job Buffer Size** can be set to **Disabled** or from **10**% to **100**% in 1% increments. The first displayed size is **10**%. When the job buffer size is changed and saved, the hard disk is reformatted and current hard disk contents, such as fonts and macros, are deleted.
*** Factory Default**	

Setup Menu Selections (Continued)

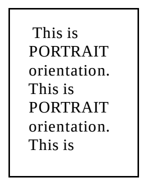
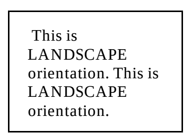
Menu Item	Values and Functions of the Menu Items
Job Accounting	Off* On If you have an optional disk installed in your printer, set Job Accounting On to use the disk to store statistical information about your most recent print jobs. The statistics include whether the job printed with or without errors, the time required to print the job, the size (in bytes) of the job, the requested paper size and paper type, the total number of printed pages and the number of copies requested. The **Job Accounting** menu item does not display if the hard disk option is defective, Read / Write or Write protected or if **Job Buffer Size** is set to 100%. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. If your printer has a hard disk installed, it is capable of compiling print job statistics and storing them to disk. You may print these statistics. See **Job Acct Stat** on page 81 for more information.
Job Acct Limit	Disabled 10...1000 (1000*) The **Job Acct Limit** menu item does not display if the hard disk option is defective, Read / Write or Write protected or **Job Buffer Size** is set to 100%. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. The **Job Acct Limit** menu item specifies the number of print jobs for which statistics are maintained on your printer hard disk. For example, if you set the limit to 10, the statistics from the 10 most recent print jobs are stored to disk. When the limit is reached, the oldest print job statistics are discarded and replaced with the statistics from the print job currently being printed. The number of jobs contained in the statistics data never exceeds the Job Accounting Limit. Note: When **Job Acct Limit** is set to **Disabled,** print job statistics are stored for each print job until the hard disk is full. Note: When the Job Accounting Limit is modified, all print job statistics currently stored on the hard disk are cleared.
*** Factory Default**	

PCL Emul Menu

PCL Emul Menu Selections

Menu Item	Values and Functions of the Menu Items
Font Source	Resident* Download Flash Disk All The **Font Source** setting controls which fonts appear in the Font Names menu. The values are Resident, Download, Flash, Disk, and All. For more information, see "Understanding Fonts" on page 329.
Font Name	Font position and font name are displayed on both lines of the operator panel. (R0 Courier*) Always select the font source before you select a font name. After you select a font source, choose the specific font from the Font Name menu. The printer displays the font source abbreviation, font ID, and font name for each font. The font source abbreviation is R for resident, F for flash, K for disk, and D for download. To print a font sample list showing all the fonts available for PCL emulation, select **MENUS**, **TESTS MENU**, **Print Fonts**, and **PCL Fonts.**
Point Size (Only displayed for typographic fonts.)	1 to 1008 in increments of 0.25 (12*) If you chose a scalable typographic font, you can select the point size for the font. Point size refers to the height of the characters in the font. One point equals approximately 1/72 of an inch. You can select point sizes from 1 to 1008 in increments of 0.25 points.
Pitch (Only displayed for fixed or monospaced fonts.)	0.08 to 100 in increments of 0.01 (10*) If you chose a scalable monospaced font, you can select the font pitch. Pitch refers to the number of fixed-space characters in a horizontal inch of type. You can select a pitch from 0.08 to 100 characters per inch (cpi) in increments of 0.01 cpi. For non-scalable monospaced fonts, the pitch is displayed, but it cannot be changed.
*** Factory Default**	

PCL Emul Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Symbol Set	Symbol Set name is displayed on both lines of the operator panel. The printer displays the symbol set ID and symbol set name. 10U PC-8* (Country specific) 12U PC-850* (Country specific) A symbol set is a set of alphabetic and numeric characters, punctuation, and special symbols used when printing with a selected font. Symbol sets support the different requirements for languages or specific applications, such as math symbols for scientific text. The printer displays only the symbol sets supported for the selected font name.
Orientation	Portrait* Landscape The Orientation setting determines how the printing is oriented on the page. *Portrait* means the printing is parallel to the short edge of the paper.  *Landscape* means the printing is parallel to the long edge of the paper. 
Lines per Page	1 ... 255 60* (Country specific) 64* (Country specific) Use the Lines per Page menu item to change the number of lines that print on each page. The setting can range from 1 to 255 lines per page. The printer sets the amount of space between each line (vertical line spacing) based on the **Lines per Page**, **PAPER SIZE,** and **Orientation** settings. Select the correct **PAPER SIZE** and **Orientation** before setting **Lines per Page**.
*** Factory Default**	

PCL Emul Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
A4 Width	198 mm* 203 mm The A4 Width menu item lets you select the width of the logical page for A4 paper. When you select **198 mm**, the width of the logical page is compatible with that of the Hewlett-Packard LaserJet 5 printer. When you select **203 mm**, the width of the logical page is wide enough to print eighty 10-pitch characters.
*** Factory Default**	

PCL Emul Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
TRAY RENUMBER	• Assign MP Feeder • Assign Tray x (x represents a tray number from 1 to 5.) • Assign Env Feedr • Assign Man Paper • Assign Man Env Each of the above menu items supports the following three values: - Off* - 0 ... 199 - None Only installed paper sources are displayed on the operator panel as values. However, you may set **TRAY RENUMBER** to uninstalled sources. The **TRAY RENUMBER** menu item lets you configure your printer to work with printer drivers or applications that use different source assignments to request a given input source. Select **Off** to use the factory default paper source assignments. Select a numeric value (**0 ... 199**) to assign a custom value to a paper source. Select **None** if you want the paper source to ignore the Select Paper Feed command. • VIEW FACTORY DEF Select **VIEW FACTORY DEF** to view the factory default values assigned to each source. • Restore Defaults - Yes - No Select **Yes** to return all tray assignments to factory default values. See “Paper Sources” on page 140 for information on available paper sources for your printer model. Refer to the *Technical Reference* for more information about assigning source numbers.
*** Factory Default**	

PCL Emul Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Auto CR after LF	Off* On The Auto CR after LF setting determines whether the printer automatically performs a carriage return after a line feed control command.
Auto LF after CR	Off* On The Auto LF after CR setting determines whether the printer automatically performs a line feed after a carriage return control command.
*** Factory Default**	

PostScript Menu

PostScript Menu Selections

Menu Item	Values and Functions of the Menu Items
PictureGrade	Off On* Use the **PictureGrade**™ menu item to improve the quality of gray-scale printing at 300 and 600 dpi resolution in PostScript Level 2 emulation. If you select **Off**, the printer uses the standard screening parameters. If you select **On**, different default screening parameters are used to improve the print quality of graphics. See “PictureGrade” on page 347 for more information.
Print PS Error	Off* On Set **Print PS Error On** to print PostScript Level 2 emulation errors. If an error occurs, the job stops processing, the error message prints, and the printer flushes the job. If **Print PS Error** is set **Off** and an error occurs, the job flushes without an indication of the error.
Font Priority	Resident* Flash / Disk The **Font Priority** menu item is only displayed when at least one of the following is installed: • a formatted, non-defective, non-Read / Write or Write protected hard disk option *and* **Job Buffer Size** is not set to 100%. • a formatted, non-defective, non-Read / Write or Write protected flash option. The **Font Priority** menu item lets you modify the device order used by the PostScript interpreter for locating fonts. Select **Resident** to have the interpreter search the printer internal ROM storage device *before* any external devices. Select **Flash/Disk** to have the interpreter search Flash Memory, *then* Disk, and finally the printer internal ROM storage device.
*** Factory Default**	

Parallel Menu

The following menu items appear when you select **PARALLEL MENU.** The second level of menus for Parallel Menu are:

- STD PARALLEL

  The Standard Parallel menu item is displayed as a standard feature or as an option.

- PARALLEL OPT 1
- PARALLEL OPT 2
- PARALLEL OPT 3

Parallel Option 1 to Parallel Option 3 are displayed if a Parallel Option card is installed in connectors 1 to 3 on the printer system board. The parallel functions for each card are displayed as values in the Parallel Option menu for that card.

The following menu items set the configuration of the parallel interface connection.

Parallel Menu Selections

Menu Item	Values and Functions of the Menu Items
PCL SmartSwitch	Off On* Setting **PCL SmartSwitch On** lets the printer examine the data on the parallel interface connection and select PCL emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
PS SmartSwitch	Off On* Setting **PS SmartSwitch On** lets the printer examine the data on the parallel interface connection and select PostScript Level 2 emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
NPA Mode	On Off Auto* NPA is a mode of bidirectional communication that follows the *Network Printing Alliance Protocol, A Printer/Host Control Specification Developed by the NPA*. This mode requires the printer to perform special processing of the data. The NPA Mode setting under the PARALLEL MENU item only applies to the parallel interface connection. If **NPA Mode** is set **On**, the data received must be in NPA format. If not, it is rejected as bad data. If **NPA Mode** is set **Off**, the printer does not perform any NPA processing. If **NPA Mode** is set to **Auto**, the printer examines the data to determine the format and then processes it in either format. Changing the NPA Mode setting automatically resets the printer.
*** Factory Default**	

Using the Operator Panel and Menus

Parallel Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Parallel Buffer	Disabled Auto* 3K to maximum size allowed Your printer has a variable buffer size that can be changed from the operator panel. You can configure the size of the input port buffers to meet your system needs. The maximum size available for modification depends on the amount of memory in your printer, the size of the other link buffers, and if the **Resource Save** setting is **On** or **Off**. To maximize the range for the Parallel Buffer size, you can disable or reduce the size of the serial, network, Infrared, Fax, and LocalTalk buffers. The **Auto** setting indicates the printer selects the buffer size based on the total memory available. Changing the Parallel Buffer setting automatically resets the printer.
Job Buffering	Off* On The **Job Buffering** menu item does not display if the formatted hard disk is defective, is Read / Write or Write protected, or if the Job Buffer Size is set to Disabled. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Also, see Job Buffer Size on page 93. Job buffering lets you delay processing of a print job. The job is temporarily stored on an optional disk before being printed. This usually frees the host computer during the actual printing of a print job. If **Job Buffering** is set **On**, print jobs are buffered to the hard disk. If **Job Buffering** is set **Off**, the print jobs are not buffered. Changing the Job Buffering setting automatically resets the printer.
Advanced Status	Off On* If **Advanced Status** is set **On**, bidirectional communication is enabled through the parallel interface.
Protocol	Standard Fastbytes* If you use a parallel interface, you can select between **Standard** and **Fastbytes** protocol. Fastbytes is compatible with most existing parallel interface implementations. Use Standard only if you experience parallel interface problems. Refer to the *Technical Reference* for more information on the parallel interface.
*** Factory Default**	

Parallel Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Honor Init	Off* On If you use a parallel interface, the Honor Init setting determines whether the printer honors hardware initialization requests from the computer. The computer requests initialization by activating the INIT signal on the parallel interface. Many personal computers activate the INIT signal each time the computer is turned on and off.
Parallel Mode 1	Off On* This setting enables or disables the pull up resistors on the parallel port signals. It is useful for personal computers that have open collector outputs on the parallel port signals. Set **Parallel Mode 1** to **On** to disable the resistors or **Off** to enable the resistors.
Parallel Mode 2	Off On* This setting determines if the parallel port data is sampled on the leading or trailing edge of strobe. If **Parallel Mode 2** is set **On**, the parallel port data is sampled on the leading edge of strobe. The parallel port data is sampled on the trailing edge of strobe if **Parallel Mode 2** is set **Off**.
*** Factory Default**	

Serial Menu

The Serial Menu is only displayed when a serial interface exists on the printer model as a standard feature or as an option. Serial interface is a standard feature on the Optra S 1855.

The following menu items appear when you select **SERIAL MENU.** The second level of menus for Serial Menu are:

- STANDARD SERIAL

  The Standard Serial menu item is displayed for printer models with serial interface as a standard feature or as an option.

- SERIAL OPTION 1
- SERIAL OPTION 2
- SERIAL OPTION 3

Serial Option 1 to Serial Option 3 are displayed if a Tri-Port card is installed in connectors 1 to 3 on the printer system board. The serial functions for each card are displayed as values in the Serial Option menu for that card.

Menu items set the configuration of the serial interface connection. The items are listed in the order that they appear in the menu.

Serial Menu Selections

Menu Item	Values and Functions of the Menu Items
PCL SmartSwitch	Off On* Setting **PCL SmartSwitch On** lets the printer examine the data on the serial interface connection and selects PCL emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting **On** as the default.
PS SmartSwitch	Off On* Setting **PS SmartSwitch On** lets the printer examine the data on the serial interface connection and selects PostScript Level 2 emulation if the data indicates that is the printer language. If both **PCL Smartswitch** and **PS Smartswitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
NPA Mode	On Off Auto* NPA is a mode of bidirectional communication that follows the *Network Printing Alliance Protocol, A Printer/Host Control Specification Developed by the NPA*. This mode requires the printer to perform special processing of the data. The NPA Mode menu item under SERIAL MENU only applies to the serial interface connection. If **NPA Mode** is set **On**, the data received must be in NPA format. If not, it is rejected as bad data. If **NPA Mode** is set **Off**, the printer does not perform any NPA processing. If **NPA Mode** is set to **Auto**, the printer examines the data to determine the format and then processes it in either format. Changing the NPA Mode setting automatically resets the printer.
*** Factory Default**	

Serial Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Serial Buffer	Disabled Auto* 3K to maximum size allowed Your printer has a variable buffer size that can be changed from the operator panel. You can configure the size of the input port buffers to meet your system needs. The maximum size available for modification depends on the amount of memory in your printer, the size of the other link buffers, and if the **Resource Save** setting is **On** or **Off**. To maximize the range for the Serial Buffer size, you can disable or reduce the size of the parallel, network, Infrared, Fax, and LocalTalk buffers. The Auto setting indicates the printer selects the buffer size based on the total memory available. Changing the Serial Buffer setting automatically resets the printer.
Job Buffering	Off* On The **Job Buffering** menu item does not display if the formatted hard disk is defective, is Read / Write or Write protected, or if the Job Buffer Size is set to Disabled. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Also, see Job Buffer Size on page 93. Job buffering lets you delay processing of a print job. The job is temporarily stored on an optional hard disk before being printed. This usually frees the host computer during the actual printing of a print job. If **Job Buffering** is set **On**, print jobs are buffered to the hard disk. If **Job Buffering** is set **Off**, the print jobs are not buffered. Changing the Job Buffering setting automatically resets the printer.
RS-232 / RS-422	RS-232* RS-422 Choose the serial communication configuration for your printer. If RS-422 is selected, Serial Protocol is automatically set to XON / XOFF.
RS-422 Polarity	Normal* Reverse If you select RS-422 for the serial communication configuration, you can then select Normal or Reverse polarity.
*** Factory Default**	

Using the Operator Panel and Menus

Serial Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Serial Protocol	DTR* (hardware handshaking) DTR / DSR (hardware handshaking) XON / XOFF (software handshaking) XON / XOFF / DTR (combined handshaking) XONXOFF / DTRDSR (combined handshaking) If you use a serial interface, you can select one of the preceding protocols and set it for each of the attached serial ports. The printer supports hardware handshaking, software handshaking, and combined hardware and software handshaking as indicated in the preceding list. Refer to the *Technical Reference* for more information on the serial interface.
Robust XON	Off* On This printer setting only applies to the serial port if the handshaking protocol uses XON / XOFF pacing. When **Robust XON** is set **On**, the printer sends a continuous stream of XONs to the host computer to indicate that the serial port is ready to receive more data. An XON is sent every second as long as no data is received across the serial port in the last second, the last XON is accepted by the host computer, and the printer is **Ready** to receive data from the serial port.
Baud	1200 2400 4800 9600* 19200 38400 57600 115200 138200 (Standard Serial Menu only) 172800 (Standard Serial Menu only) 230400 (Standard Serial Menu only) 345600 (Standard Serial Menu only) If you use a serial interface, you can select the rate at which data is being sent to or from your computer. Refer to the *Technical Reference* for information about the range of baud values.
*** Factory Default**	

Serial Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Data Bits	7 8* If you use a serial interface, you can select the number of data bits that are sent in each transmission frame. Refer to the *Technical Reference* for more information on data bits.
Parity	Even Odd None* Ignore This setting lets you set the parity for serial input and output data frames for each of the attached serial ports. Even — The port expects to receive data frames with an even number of logical 1's per byte. The port transmits XOFF and XON with even parity. If the port detects a parity error, the port sends an inverted question mark to the printer instead of the character sent by the host system. Odd — The port expects to receive data frames with an odd number of logical 1's per byte. The printer transmits XOFF and XON with odd parity. If the printer detects a parity error, the port sends X'5F' to the printer instead of the character sent by the host system. None — The port expects no parity bit when it receives data. The port transmits XON and XOFF without parity bits. Ignore — The port expects a parity bit when the port receives a data frame. The port ignores the parity bit. The port uses even parity when it transmits XON and XOFF. Refer to the *Technical Reference* for more information on parity.
*** Factory Default**	

Serial Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Honor DSR	Off* On DSR is one of the handshaking signals for most serial interface cables. The Honor DSR setting determines whether the printer accepts the incoming print data. If **Honor DSR** is **Off**, data received on pin 3 of serial interface is seen as valid data. If **Honor DSR** is set **On**, only data received while the DSR signal is in high condition is treated as valid data. The serial interface uses DSR to determine if data arriving on pin 3 is sent by the host computer or created by electrical noise in the serial cable. This electrical noise can cause receive errors and create corrupted data that causes stray characters to print. Set **Honor DSR On** to prevent any stray characters from printing.
*** Factory Default**	

Network Menu

Three option cards can be installed in the Optra S 2455, two option cards can be installed in the Optra S 1855, and one option card can be installed in the Optra S 1625 and Optra S 1255.

If Network Option cards are installed, you see **NETWORK MENU** on the display. Press **Select**. If the card is installed in connector 1 on the printer system board, the functions for that card are displayed as a value in the Network Option 1 menu. If the card is installed in connector 2 on the printer system board, the functions for that card are displayed as a value in the Network Option 2 menu. If the card is installed in connector 3 on the printer system board, the functions for that card are displayed as a value in the Network Option 3 menu. Functions for the three networks operate independently of each other.

The following menu items are available for the Network Option 1, Network Option 2 and Network Option 3 menus. Change the settings for this menu item to set up network communications.

Network Menu Selections

Menu Item	Values and Functions of the Menu Items
PCL SmartSwitch	Off On* Setting **PCL SmartSwitch On** lets the printer examine the data on the specified network interface connection and select PCL emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting **On** as the default.
PS SmartSwitch	Off On* Setting **PS SmartSwitch On** lets the printer examine the data on the specified network interface connection and select PostScript Level 2 emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
NPA Mode	Off Auto* NPA is a mode of bidirectional communication that follows the *Network Printing Alliance Protocol, A Printer/Host Control Specification Developed by the NPA*. This mode requires the printer to perform special processing of the data. The NPA Mode menu item under the NETWORK MENU only applies to the specified network interface connection. If **NPA Mode** is set **Off**, the printer does not perform any NPA processing. If **NPA Mode** is set to **Auto**, the printer examines the data to determine the format and then processes it in either format. Changing the NPA Mode setting automatically resets the printer.
*** Factory Default**	

Network Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Network Buffer	Auto* 3K to maximum size allowed Your printer has a variable buffer size that can be changed from the operator panel. You can configure the size of the input port buffers to meet your system needs. The maximum size available for modification depends on the amount of memory in your printer, the size of the other link buffers, and if the **Resource Save** setting is **On** or **Off**. To maximize the range for the Network buffer size for any of the three network buffers, you can disable or reduce the size of the parallel, serial, Infrared, Fax, and LocalTalk buffers. The Auto setting indicates the printer selects the buffer size based on the total memory available. Changing the Network Buffer setting automatically resets the printer.
Job Buffering	Off* On The **Job Buffering** menu item does not display if the formatted hard disk is defective, is Read / Write or Write protected, or if the Job Buffer Size is set to Disabled. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Also, see Job Buffer Size on page 93. Job buffering lets you delay processing of a print job. The job is temporarily stored on an optional hard disk before being printed. This usually frees the host computer during the actual printing of a print job. If **Job Buffering** is set **On**, print jobs are buffered to the hard disk. If **Job Buffering** is set **Off**, the print jobs are not buffered. Changing the Job Buffering setting automatically resets the printer.
NETWORK x SETUP	Values for this menu item are supplied by the network card. Access the menu to see the values. x represents the connector in which the card is attached. Refer to the documentation that came with your network option.
*** Factory Default**	

Using the Operator Panel and Menus

Infrared Menu

If a Tri-Port card is installed, the Infrared Menu and its values are displayed.

Infrared Menu Selections

Menu Item	Values and Functions of the Menu Items
Infrared Port	Disabled IR Option 1* IR Option 2 IR Option 3 Some printer models allow installation of multiple cards; however, the printer does not allow the activation of more than one infrared port. This setting lets you select which port is active or lets you specify that no port is active by selecting **Disabled**. The Infrared Port menu items are displayed according to the way you installed your options. For example, if cards are installed into connectors 1 and 3, only **Disabled**, **IR Option 1**, and **IR Option 3** are displayed.
PCL SmartSwitch	Off On* Setting **PS SmartSwitch On** lets the printer examine the data on the parallel interface connection and select PostScript Level 2 emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
PS SmartSwitch	Off On* Setting **PS SmartSwitch On** lets the printer examine the data on the specified network interface connection and select PostScript Level 2 emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
*** Factory Default**	

Infrared Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
NPA Mode	Off Auto* NPA is a mode of bidirectional communication that follows the *Network Printing Alliance Protocol, A Printer/Host Control Specification Developed by the NPA*. This mode requires the printer to perform special processing of the data. The NPA Mode menu item under the INFRARED MENU only applies to the specified infrared interface connection. If **NPA Mode** is set **Off**, the printer does not perform any NPA processing. If **NPA Mode** is set to **Auto**, the printer examines the data to determine the format and then processes it in either format. Changing the NPA Mode setting automatically resets the printer.
Infrared Buffer	Disabled Auto* 5K to maximum size allowed Your printer has a variable buffer size that can be changed from the operator panel. You can configure the size of the input port buffers to meet your system needs. The maximum size available for modification depends on the amount of memory in your printer, the size of the other link buffers, and if the **Resource Save** setting is **On** or **Off**. To maximize the range for the Infrared Buffer size, you can disable or reduce the size of the parallel, serial, network, Fax, and LocalTalk buffers. The Auto setting indicates the printer selects the buffer size based on the total memory available. Changing the Infrared Buffer setting automatically resets the printer.
Job Buffering	Off* On The **Job Buffering** menu item does not display if the formatted hard disk is defective, is Read / Write or Write protected, or if the Job Buffer Size is set to Disabled. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Also, see Job Buffer Size on page 93. Job buffering lets you delay processing of a print job. The job is temporarily stored on an optional hard disk before being printed. This usually frees the host computer during the actual printing of a print job. If **Job Buffering** is set **On**, print jobs are buffered to the hard disk. If **Job Buffering** is set **Off**, the print jobs are not buffered. Changing the Job Buffering setting automatically resets the printer.
*** Factory Default**	

Infrared Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Window Size	Auto* 1 The Window Size setting specifies the maximum number of infrared frames the printer can receive before it must send an acknowledgment to the host computer. If Auto is selected, the printer automatically sets the window size during power-on reset to maximize link performance.
Transmit Delay	Auto* None 1 ... 15 The Transmit Delay setting defines the amount of time the printer must wait before transmitting meaningful infrared data to the host computer and the amount of time the printer requests the host computer to wait before it transmits meaningful infrared data. The Auto setting is recommended.
Max Baud Rate	2400 9600 19200 38400 57600 115200 576000 1152000* 4000000 The maximum baud rate possible for both the printer and the infrared adapter is automatically set during power-on. However, if your printer is situated in a bright or highly reflective environment, you may experience intermittent communication problems. If you do, select a lower baud rate for the infrared connection. Note: Only displayed when Infrared Port is not set to Disabled.
*** Factory Default**	

LocalTalk Menu

If a Tri-Port card is installed, the LocalTalk Menu and its values are displayed.

LocalTalk Menu Selections

Menu Item	Values and Functions of the Menu Items
LocalTalk Port	Disabled LTalk Option 1* LTalk Option 2 LTalk Option 3 Some printer models allow installation of multiple interface cards; however, the printer does not allow the activation of more than one LocalTalk port. This setting lets you select which port is active or lets you specify that no port is active by selecting **Disabled**. The LocalTalk Port menu items are displayed according to the way you installed your options. For example, if cards are installed into connectors 1 and 3, only **Disabled**, **LTalk Option 1**, and **LTalk Option 3** are displayed.
PCL SmartSwitch	Off On* Setting **PCL SmartSwitch On** lets the printer examine the data on the parallel interface connection and select PCL emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
PS SmartSwitch	Off On* Setting **PS SmartSwitch On** lets the printer examine the data on the specified network interface connection and select PostScript Level 2 emulation if the data indicates that is the printer language. If both **PCL SmartSwitch** and **PS SmartSwitch** are set **Off**, the printer uses the language specified in the Printer Language menu as the default. If only one SmartSwitch setting is set **Off**, the printer uses the language that has its SmartSwitch setting set **On** as the default.
*** Factory Default**	

LocalTalk Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
NPA Mode	Off Auto* NPA is a mode of bidirectional communication that follows the *Network Printing Alliance Protocol, A Printer/Host Control Specification Developed by the NPA*. This mode requires the printer to perform special processing of the data. The NPA Mode menu item under LOCALTALK MENU only applies to the specified network interface connection. If **NPA Mode** is set **Off**, the printer does not perform any NPA processing. If **NPA Mode** is set to **Auto**, the printer examines the data to determine the format and then processes it in either format. Changing the NPA Mode setting automatically resets the printer.
LocalTalk Buffer	Disabled Auto* 6K to maximum size allowed Your printer has a variable buffer size that can be changed from the operator panel. You can configure the size of the input port buffers to meet your system needs. The maximum size available for modification depends on the amount of memory in your printer, the size of the other link buffers, and if the **Resource Save** setting is **On** or **Off**. To maximize the range for the LocalTalk Buffer size, you can disable or reduce the size of the parallel, serial, network, Fax, and Infrared buffers. The Auto setting indicates the printer selects the buffer size based on the total memory available. Changing the LocalTalk Buffer setting automatically resets the printer.
Job Buffering	Off* On The **Job Buffering** menu item does not display if the formatted hard disk is defective, is Read / Write or Write protected, or if the Job Buffer Size is set to Disabled. **61 Defective Disk** displays during printer power on. See **61 Defective Disk** on page 189 for more information. Also, see Job Buffer Size on page 93. Job buffering lets you delay processing of a print job. The job is temporarily stored on an optional hard disk before being printed. This usually frees the host computer during the actual printing of a print job. If **Job Buffering** is set **On**, print jobs are buffered to the hard disk. If **Job Buffering** is set **Off**, the print jobs are not buffered. Changing the Job Buffering setting automatically resets the printer.
*** Factory Default**	

LocalTalk Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
NPA Hosts	1 2* 3 ... 10 Use this setting to specify the maximum number of NPA hosts which may register for NPA printer alerts. When the number of hosts registered for NPA alerts exceeds the quantity specified by NPA Hosts, any additional hosts attempting to register for alerts are ignored. Changing the NPA Hosts setting automatically resets the printer.
LocalTalk Name	Lexmark (Printer Name) This setting represents the printer model name.
LocalTalk Addr	(LocalTalk Node Number) The LocalTalk Address is actually the LocalTalk Node number assigned to the printer. It is determined between the network and the printer, so it cannot be modified through the printer operator panel.
LocalTalk Zone	(Zone name provided by LocalTalk network) This setting determines the LocalTalk Zone. This setting cannot be modified through the printer operator panel.
*** Factory Default**	

Fax Menu

Fax Menu Selections

Menu Item	Values and Functions of the Menu Items
Fax Port	Disabled* Std Serial Ser Option 1 Ser Option 2 Ser Option 3 Some printer models allow installation of multiple serial ports; however, the printer does not allow the activation of more than one fax port. This setting lets you select which port is active or lets you specify that no port is active by selecting **Disabled**. The **Fax Port** menu items are displayed according to the way you installed your options. For example, if cards are installed into connectors 1 and 3, only **Disabled**, **Ser Option 1**, and **Ser Option 3** are displayed. Changing the Fax Port setting automatically resets the printer.
Fax Baud	1200 2400 4800 9600 19200* 38400 57600 115200 **Fax Baud** lets you set the baud used by a serial port configured to receive faxes.
Fax Data Bits	7 8* **Fax Data Bits** lets you select the number of data bits that are sent in each transmission frame for the serial port that is configured to receive faxes.
*** Factory Default**	

Fax Menu Selections (Continued)

Menu Item	Values and Functions of the Menu Items
Fax Parity	Even Odd None* Ignore This setting lets you set the parity for serial input and output data frames for the serial port that is configured to receive faxes. Even The port expects to receive data frames with an even number of logical 1's per byte. The port transmits XOFF and XON with even parity. If the port detects a parity error, the port sends an inverted question mark to the printer instead of the character sent by the host system. Odd The port expects to receive data frames with an odd number of logical 1's per byte. The printer transmits XOFF and XON with odd parity. If the printer detects a parity error, the port sends X'5F' to the printer instead of the character sent by the host system. None The port expects no parity bit when it receives data. The port transmits XON and XOFF without parity bits. Ignore The port expects a parity bit when the port receives a data frame. The port ignores the parity bit. The port uses even parity when it transmits XON and XOFF. Refer to parity in the *Technical Reference* for more information.
Fax Buffer	Disabled Auto* 3K to maximum size allowed Your printer has a variable buffer size that can be changed from the operator panel. You can configure the size of the input port buffers to meet your system needs. The maximum size available for modification depends on the amount of memory in your printer, the size of the other link buffers, and if the **Resource Save** setting is **On** or **Off**. To maximize the range for the Fax Buffer size, you can disable or reduce the size of the parallel, serial, network, Infrared and LocalTalk buffers. The Auto setting indicates the printer selects the buffer size based on the total memory available. Changing the Fax Buffer setting automatically resets the printer.
*** Factory Default**	

Using the Operator Panel and Menus

Disabling the Operator Panel Menus

To disable the menus so that changes cannot be made to the printer settings:

1. **Turn the printer power Off (O).**
2. **While pressing Go and Stop, turn the printer power On (|).**
3. **Release the buttons when Performing Self Test is displayed.**

   When the printer self test is complete, the **Ready** message is displayed.

Now, if you press the **Menu>** or **<Menu** button, the **Menus Disabled** message is displayed.

To enable the menus, repeat the previous steps.

Note: You can enable menus only if the NVRAM password is set to 0 (factory default). Use PJL to set the NVRAM password. Refer to the *Technical Reference* for more information.

Using Print Materials

Chapter 4

Your printer provides high quality printing on a variety of materials. A number of things must be considered before you print:

Print Materials

The print quality and feeding reliability you get with the printer and options can vary with the type and size of print material you use. Guidelines are provided in this chapter for each type of print material.

Always print samples on the print material you are considering before buying large quantities.

The table on page 125 lists the types of print material you can use with your printer. It indicates which paper sources can handle each type of print material.

Material	Type	Weight for Paper Sources		
		250-sheet input tray and 500-sheet trays	Multipurpose feeder and optional 250-sheet drawer	Envelope Feeder
Paper	Xerographic or business paper	60 to 176 g/m^2 grain long (16 to 47 lb bond)	60 to 135 g/m^2 grain long (16 to 36 lb bond)	
Card Stock - Upper Limit (Grain Long)[1]	Index Bristol	163 g/m^2 (90 lb)	120 g/m^2 (67 lb)	
	Tag	163 g/m^2 (100 lb)	120 g/m^2 (74 lb)	
	Cover	176 g/m^2 (65 lb)	135 g/m^2 (50 lb)	
Card Stock Upper Limit (Grain Short)[1]	Index Bristol	199 g/m^2 (110 lb)	163 g/m^2 (90 lb)	
	Tag	203 g/m^2 (125 lb)	163 g/m^2 (100 lb)	
	Cover	216 g/m^2 (80 lb)	176 g/m^2 (65 lb)	
Transpar-encies	Laser printer transparency	138 to 146 g/m^2 (37 to 39 lb bond)	138 to 146 g/m^2 (37 to 39 lb bond)	
Labels Upper Limit	Paper	180 g/m^2 (48 lb bond)	163 g/m^2 (43 lb bond)	
	Dual-Web Paper	180 g/m^2 (48 lb bond)	163 g/m^2 (43 lb bond)	
	Vinyl	300 g/m^2	260 g/m^2	
	Polyester	220 g/m^2 (59 lb bond)	220 g/m^2 (59 lb bond)	
Integrated Forms	Pressure Sensitive Area[2]	140 to 175 g/m^2	140 to 175 g/m^2	
	Paper Base (grain long)	75 to 135 g/m^2 (20 to 36 lb bond)	75 to 135 g/m^2 (20 to 36 lb bond)	
Envelopes	Sulfite, wood-free, or up to 100% cotton bond		60 to 105 g/m^2 (16 to 28 lb bond)[3,4]	75 to 90 g/m^2 (20 to 24 lb bond)

Note: The duplex option supports all paper weights and types that the printer supports except for transparencies and envelopes.

[1] See "Grain Direction" on page 127 for specific recommendations.
[2] Pressure sensitive area must enter the printer first. For example, the base enters last.
[3] 100% cotton content maximum weight is 24 lb bond.
[4] 28 lb bond envelopes are limited to 25% cotton content.

For detailed information, refer to the *Card Stock & Labels Guide,* which is available from Lexmark.

Print Material Characteristics

The paper characteristics defined below affect printing quality and reliability. We recommend that you keep these guidelines in mind when evaluating new paper stock.

Weight

The printer can automatically feed paper weights from 60 to 176 g/m^2 (16 to 47 lb bond). Paper lighter than 60 g/m^2 (16 lb) might not be stiff enough to feed properly, causing paper jams. For best performance, use 75 g/m^2 (20 lb bond) grain long paper. If you want to print on print materials narrower than 182 x 257 mm (7.2 x 10.1 in.), the basis weight must be greater than or equal to 90 g/m^2 (24 lb bond).

Curl

Curl is the tendency of paper to curve at its edges. If curl is excessive, it can cause paper feeding problems. Curl usually occurs after the paper passes through the printer, where it is exposed to high temperatures. Storing paper unwrapped in humid conditions, even in the paper tray, can contribute to paper curling.

Smoothness

The degree of smoothness of paper directly affects print quality. If the paper is too rough, the toner does not fuse to the paper properly, resulting in poor print quality. If the paper is too smooth, it can cause paper feeding problems in the printer. Smoothness needs to be between 100 and 400 Sheffield points; however, smoothness between 100 and 250 Sheffield points produces the best print quality.

Moisture Content

The amount of moisture in the paper affects both print quality and the ability of the printer to feed the paper properly. Leave the paper in its original wrapper until you are ready to use it. This limits the exposure of the paper to moisture changes that can degrade its performance.

Grain Direction

Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either *grain long*, running the length of the paper; or *grain short*, running the width of the paper.

For 60 to 176 g/m^2 (16 to 47 lb bond) paper, grain long fibers are recommended. For papers heavier than 176 g/m^2 (47 lb bond), grain short is preferred. For the multipurpose feeder, 60 to 163 g/m^2 (16 to 43 lb bond) paper, grain long fibers are recommended. For the multipurpose feeder, papers heavier than 163 g/m^2 (43 lb bond) grain short is preferred.

Fiber Content

Most high-quality xerographic paper is made from 100% chemically pulped wood. This content provides the paper with a high degree of stability resulting in fewer paper feeding problems and better print quality. Paper containing fibers such as cotton possess characteristics that can result in degraded paper handling.

Paper Guidelines

Always use new, undamaged paper. To avoid paper jams or poor print quality:

- Do not use paper that you have cut or trimmed yourself.
- Do not mix paper sizes, weights, or types in the same paper source since mixing results in paper jams.
- Do not use coated papers.
- Do not forget to change the Paper Size setting when you use a source that does not support auto size sensing.
- Make sure the Paper Type, Paper Texture, and Paper Weight settings are correct.

Recommended Papers

To ensure the best print quality, use 75 g/m^2 (20 lb) xerographic paper. Business papers designed for general business use may also provide acceptable print quality.

It is always recommended to print several samples on the type of paper you are considering before buying large quantities. When choosing any papers, consider the weight, fiber content, and color of the paper.

The laser printing process heats paper to high temperatures of 212^{o}C (414^{o}F). Use only papers that are able to withstand these temperatures without discoloring, bleeding, or releasing hazardous emissions. Check with the manufacturer or vendor to determine whether the paper you've chosen is acceptable for laser printers.

Preprinted Forms and Letterhead

Use the following guidelines when selecting preprinted forms and letterhead paper for the printer:

- Use grain long papers for best results.

- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Choose papers that absorb ink, but do not bleed.
- Avoid papers with rough or heavily textured surfaces.
- Use papers printed with heat-resistant inks designed for use in xerographic copiers. The ink must withstand temperatures of 212°C (414°F) without melting or releasing hazardous emissions. Use inks that are not affected by the resin in the toner or the silicone in the fuser. Inks that are oxidation-set or oil-based should meet these requirements. Latex inks might not meet these requirements. If you are in doubt, contact your paper supplier.

Unsatisfactory Papers

The following papers are not recommended for use with the printer:

- Some chemically treated papers used to make copies without carbon paper, also known as carbonless papers
- Coated papers (erasable bond)
- Multiple-part forms or documents
- Preprinted papers that require a *registration* (the precise print location on the page) greater than ±0.09 in., such as optical character recognition (OCR) forms. In some cases, you can adjust registration with your software application to successfully print on these forms.
- Preprinted papers with chemicals that may contaminate the printer
- Preprinted papers that can be affected by the temperature in the printer fuser
- Rough-edged or curled papers
- Synthetic papers
- Thermal papers
- Less than 75 g/m^2 (20 lb) recycled paper
- Recycled papers containing more than 25% post consumer waste that do not meet DIN 19 309

Storing paper

Properly storing the paper you buy helps ensure trouble-free printing. Use the following guidelines:

- For best results, store paper in an environment where the temperature is approximately 21°C (70°F) and the relative humidity is 40%.
- Store cartons of paper on a pallet or shelf, rather than directly on the floor.
- If you store individual packages of paper out of the original carton, make sure they rest on a flat surface so the edges do not buckle or curl.
- Do not place anything on top of the paper packages.

Envelope Guidelines

For optimum printing on envelopes, use only new, undamaged envelopes. When you print on envelopes, the glue must not be exposed. The combination of high humidity (over 60%) and the high printing temperatures may seal the envelopes.

When printing on envelopes, be sure to select **Env Feeder** or **MP Feeder** as the paper source and set the correct envelope size.

The laser printing process heats envelopes to a temperature of 200°C (392°F). Use only envelopes that are able to withstand these temperatures without sealing, excessive curling, wrinkling, or releasing hazardous emissions. If you have any doubts about the envelopes you are considering using, check with the envelope supplier.

For best performance, use envelopes made from 75 g/m^2 (20 lb bond) paper. You can use up to 105 g/m^2 (28 lb bond) weight for the multipurpose feeder or 90 g/m^2 (24 lb bond) weight for the envelope feeder as long as the cotton content is 25% or less. Envelopes with 100% cotton content must not exceed 90 g/m^2 (24 lb bond) weight.

To minimize jams, do *not* use envelopes that:

- Have excessive curl or twist
- Are stuck together
- Are damaged in any way
- Contain windows, holes, perforations, cutouts, or embossing
- Use metal clasps, string ties, or metal folding bars
- Have an interlocking design
- Have postage stamps attached
- Have any exposed adhesive when the flap is in the sealed or closed position
- Have nicked edges or bent corners
- Have rough, cockle, or laid finishes

Label Guidelines

The printer can print on many labels designed for use with laser printers. These labels are supplied in letter-size and A4-size sheets.

When printing on labels, be sure to select **Labels** in the **PAPER TYPE** menu in the **PAPER MENU**.

Do not load labels together with paper or transparencies in the same paper tray. Combining print materials can cause feeding problems.

Do not load partial sheets with areas exposed by missing labels. This can cause labels to peel off during printing, resulting in a paper jam. Partial sheets will also contaminate your printer and your cartridge with adhesive, and could void your printer and cartridge warranties.

Labels are one of the most difficult print materials for laser printers. A special fuser cleaner should be used for label application to optimize feed reliability. See "Ordering a Label Fuser Cleaner" on page 248 for more information.

After continuously printing approximately 10,000 page sides of labels (or each time you replace the print cartridge), complete the following steps to maintain printer feeding reliability:

1. **Print 5 sheets of paper.**
2. **Wait approximately 5 seconds.**
3. **Print 5 more sheets of paper.**

For detailed information on label printing, characteristics, and design, refer to the *Card Stock & Labels Guide*, which is available from Lexmark.

Liner

The *liner*, also known as the *carrier* or *backing*, is the material the label is attached to. The liner carries the label through the printer. Tissue or plain bond, porous, lay-flat liners are preferred. Toner contamination is reduced and feed performance improves with these liners. Slick non-porous liners are harder to feed and increase toner buildup in the fuser and on the backup roll. Rough liners can increase paper path friction, which leads to skew and paper jams. Excessive paper dust or chaff may affect print quality. Contact your forms supplier for additional information on liners.

Adhesives

There are two major types of label adhesives: removable and permanent. Each type, with proper design, has been used successfully with your printer. Acrylic based adhesives are generally preferred for cut-sheet label printers.

The major adhesive problem is printer and cartridge contamination. Adhesive must be kept out of contact with paper path guides, drive rollers, charge roller, cartridge photoconductor drum, transfer roller, and detack fingers. This is accomplished through proper label design and the use of full label sheets (sheets that do not have areas exposed by missing labels). The adhesive can melt if the sheet stops in the fuser during a paper jam. The

adhesives are semi-liquid and may contain volatile components that can cause printer contamination or fumes when the adhesive is heated or placed under pressure.

Zone coating (or *zone printing*) of the adhesive involves placing the adhesive only where needed. Zone coating is generally used with paper labels and integrated forms. A no-adhesive border of 1 mm (0.04 in.) around the outside edge of the label sheet generally gives good results. Check with your forms supplier to determine whether selected labels are appropriate for your printer.

A stripped edge matrix of 3 mm (0.125 in.) along the outer border of the label sheet, combined with a tight adhering adhesive that does not ooze, may prevent glue contamination. This design requires a stiffer backing material to prevent crushing when the sheet is aligned on the reference edge. Generally, vinyl and polyester labels lend themselves to this design with few problems. Paper and dual-web designs require some testing to determine which backing produces good results.

Finally, make sure that the adhesive has *pull strength* adequate to prevent label peeling during printing. Adhesives must be able to withstand pressure of 25 psi and fuser temperatures of 212°C (414°F) without creating hazardous fumes or oozing from edges of labels or die-cuts. Contact your forms supplier for additional information.

Face Sheet (Printable Stock)

Paper, vinyl, and polyester are the major printable stocks used for labels. When using alternate face sheets, your forms supplier can provide information on whether the stock face can withstand temperatures of 212°C (414°F) and pressure of 25 psi. You should test the stock to ensure it works satisfactorily with your printer.

Paper Labels

Generally, cut-sheet paper labels work well with your printer. Labels with coating or sizing used to make the paper liquid-resistant should be avoided. They decrease toner adhesion and increase fuser contamination from toner. Paper labels, at a minimum, should be equivalent in weight and rigidity to 20 lb xerographic bond paper.

Dual-Web Paper Labels

Dual-web paper labels are paper labels combined with a sheet of paper stock to form a cut-sheet design. The liner must be rigid enough to withstand the pick force of the printer.

The overlay of the two print materials must be thin enough to allow the label sheet to remain flat in the tray. The sheet should have no adhesive exposed in the overlay area or anywhere along the front or back of the two materials. A 1 mm (0.04 in.) non-glue strip is recommended along the edge of the overlay.

The label portion is usually a paper label. The same guidelines applicable to paper labels are applicable to these labels. Testing is recommended before purchasing large quantities of dual-web paper labels.

Vinyl Labels

Some vinyl labels work well with your printer. It is always recommended to print several samples of the labels you are considering before buying large quantities.

Since vinyls are heat sensitive, the liners need to be thick enough to absorb excess heat and prevent melting. Thin liners or low peel strength adhesive may lead to peeling of vinyl labels, which will require printer servicing. Vinyls are non-absorbing, which leads to toner build-up in the fuser and may require special printer maintenance. Vinyls must have a topcoat to provide good toner adhesion.

Polyester Labels

Polyester labels are less heat sensitive than vinyl labels but are also non-absorbing. Liners for polyester labels can be thinner, but requirements for topcoats and printer maintenance are similar to those for vinyl labels.

Topcoats

Topcoats for non-paper labels are generally water based or solvent based. Care should be taken to avoid topcoats containing chemicals that emit hazardous fumes when heated or put under pressure. Topcoats affect the print quality and adhesion of toner to the label (fuse grade). To prevent fuser damage, topcoats must be able to withstand temperatures up to 212°C (414°F) and pressure up to 25 psi for one second.

Water-based topcoats tend to be higher in electrical conductivity than solvent-based topcoats. When using some water-based topcoats with heavy liners, the *fuse grade* (how well the toner adheres to the page) may fall below acceptable levels. Print quality may degrade with heavier liners. Using a lighter liner may reduce the appearance of splatter. Print quality with some water-based topcoats may not be acceptable for all applications.

Solvent-based topcoats tend to be lower in electrical conductivity than water-based topcoats. When using some solvent-based topcoats with heavy liners, fuse grade may fall within acceptable levels. Print quality may degrade with heavier liners. Using a lighter liner may reduce the appearance of splatter. Print quality with some solvent-based topcoats may not be acceptable for all applications.

Perforations

If the liner is perforated, make sure that no adhesive accumulates on the top or back of the label sheet. The perforation line should stop 1.6 mm (0.06 in.) from the edge of the sheet to prevent jams and tearing of the sheet within the printer path. Perforations

should be ironed to reduce the thickness caused by the perforation process and to reduce nesting of forms. Edges should be smooth and clean with no roll-over. *Laser-perfs* (also known as *micro-perfs* or *data-perfs*) of 20 to 30 perfs per inch are generally more stable and are preferred. The smaller perforations do not normally nest or create excessive paper dust and debris (paper chaff). Make sure paper chaff created during the conversion process is removed before packaging.

Label Design

Stripped edge matrix is the area around the outer edge of the cut-sheet, which is sometimes removed before printing. *Total strip matrix*, the non-print area around each die-cut label, is also sometimes removed before printing. This helps you peel the labels from the backing.

Butt-cut labels are cut flush to one another, with no area in-between. Butt-cut labels may or may not have an edge matrix removed.

Die-cut labels are cut with a non-print area between each label.

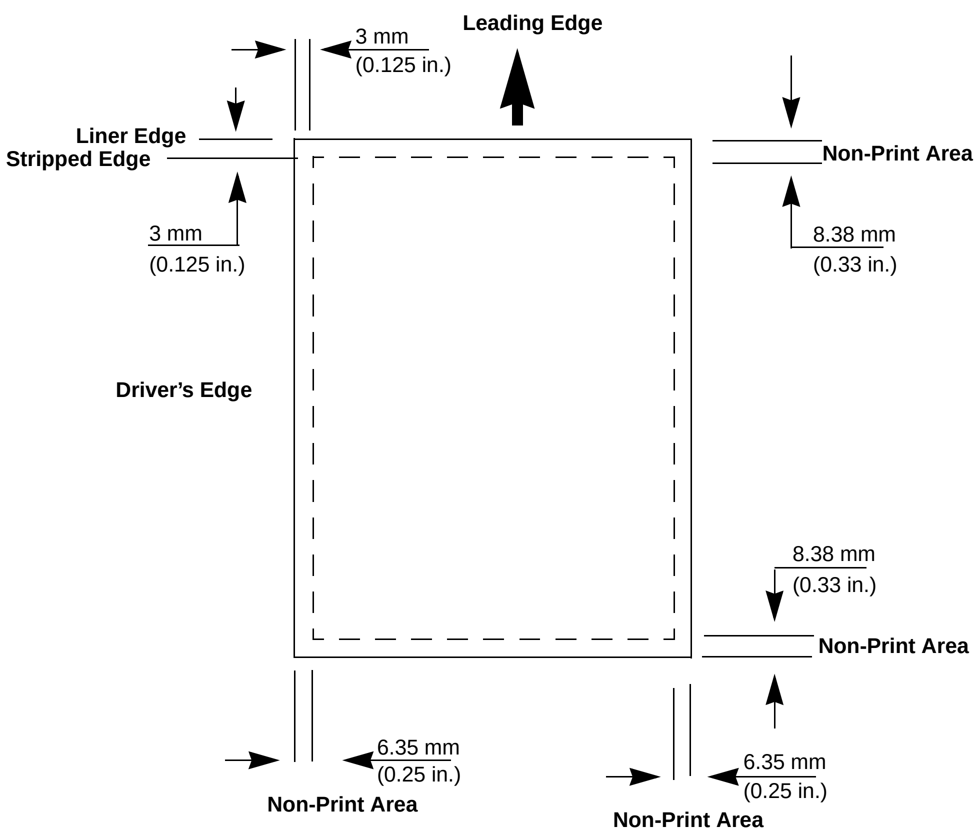
If you are using a butt-cut or die-cut label, make sure adhesive contamination does not occur. We recommend a maximum stripped edge matrix of 3 mm (0.125 in.) along the outer edge *or* zone coating with a non-adhesive perimeter of 1 mm. For best results, do not print within 1.02 mm (0.04 in.) of the edge of the label, of the perforations, or between die-cuts of the label.

The use of cut-sheet labels that have adhesive to the edge of the sheet will contaminate your printer and cartridge, and could void your printer and cartridge warranties.

When using vinyl, polyester, paper, or dual-web labels without zone coating, butt-cut labels without any *stringers* (adhesive pulls) and with a stripped edge matrix of 3 mm (0.125 in.) are preferred. If a total strip matrix is used, print before removing the matrix. If matrix must be removed before printing, round all corners and make sure adhesive is not exposed. Minimize die-cutting,

especially through the backing material. Die-cuts should be at least 1 mm (0.04 in.) from printed areas. Back slits or pop-out windows are not recommended.

A non-print area (*waste strip*) around the outer edge of the sheet is also recommended as part of the label design. For a letter size sheet in portrait orientation, allow 8.38 mm (0.33 in.) for the non-print area along the top and bottom edges. Allow 6.35 mm (0.25 in.) for the non-print area along both sides.



(Not drawn to scale)

- Waste strips prevent you from printing too close to the edge of the sheet.
- Print should be placed at least 1 mm (0.04 in.) from die cuts and perforations.
- We recommend zone coating of the adhesive at least 1 mm (0.04 in.) away from edges to control adhesive contamination.
- If zone coating of the adhesive is not possible, a 3 mm (0.125 in.) strip should be removed on the leading and driver edge, and a non-oozing adhesive should be used.
- If the labels are vinyl, remove a 3 mm (0.125 in.) strip from the leading edge to prevent labels from peeling in the fuser.
- Portrait orientation is preferred, especially when printing bar codes.

For more information, refer to the *Card Stock & Labels Guide*, which is available from Lexmark.

Card Stock Guidelines

Card stock is single ply, and has a large array of properties. The orientation of paper fibers, moisture content, thickness, and texture can all affect printing on card stock. See page 125 for information on the preferred weight for the grain direction of print materials.

When printing on card stock, be sure to select **Card Stock** in the **PAPER TYPE** menu in the **PAPER MENU**.

Preprinting, perforation, and creasing can significantly affect the print quality. Preprinting introduces semi-liquid and volatile components in the printer. Perforation and creasing of forms may cause nesting or interlocking that leads to paper handling or jamming problems.

After printing approximately 10,000 page sides of card stock (or each time you replace the print cartridge), complete the following steps to maintain printer feeding reliability:

1. **Print 5 sheets of paper.**
2. **Wait approximately 5 seconds.**
3. **Print 5 more sheets of paper.**

For more information, refer to the *Card Stock & Labels Guide*, which is available from Lexmark.

Transparency Guidelines

The printer can print directly on transparencies specifically designed for use in laser printers. Print quality and durability depend on the transparency used. You should try samples of any transparencies you are considering using with the printer before buying large quantities. We recommend the Lexmark Optra 1200 dpi Laser Printer transparency, part number 1402809 (A4-size sheets) or 1402810 (letter-size sheets).

The Paper Type setting should be set to Transparency to prevent jams. See page 64. The laser printing process heats transparencies to a temperature of 212°C (414°F) when Paper Type is not set to Transparency. If you select Transparency as your Paper Type, the printer heats the transparencies to a temperature of 180°C (356°F). Use only transparencies that are able to withstand these temperatures without melting, discoloring, offsetting, or releasing hazardous emissions. Check with the manufacturer or vendor to determine whether the transparencies are usable with laser printers that heat transparencies to 180°C (356°F) or 212°C (414°F).

Transparencies can be fed automatically from all standard and optional trays for all printer models and from the multipurpose feeder on the Optra S 1855, Optra S 1625 or Optra S 1255.

Be careful when you handle transparencies. Fingerprints on the surface of the transparency cause poor print quality.

Paper Sources

The following tables give information on standard and optional paper sources for your printer model and also includes sensing capabilities for each paper source. See pages 2, 3, and 4 for illustrations showing standard and optional paper sources.

Standard Trays

Source/Features	Optra S 1255 Optra S 1625 Optra S 1855	Optra S 2455
Standard trays	250-sheet input tray	• 250-sheet input tray • dual 500-sheet drawer
Paper Size Sensing	Yes	Yes Yes
Paper Out Sensing	Yes	Yes Yes
Paper Low Sensing	Yes	Yes Yes
Tray Present Sensing	Yes	Yes Yes

Multipurpose Feeder

Source/Features	
Standard, holds 100 sheets 75 g / m^2 (20 lb)	
• Paper Size Sensing	No
• Paper Out Sensing	Yes
• Paper Low Sensing	No

Optional Drawers

Source/Features	
Optional drawers Note: An optional drawer consists of a support unit and a tray. For example, a 250-sheet drawer includes a 250-sheet tray.	• 250-sheet drawer • 500-sheet drawer
• Paper Size Sensing	Yes
• Paper Out Sensing	Yes
• Paper Low Sensing	Yes
• Tray Present Sensing	Yes

Optional Envelope Feeder

Source/ Features	
Envelope Feeder	Installable option
• Paper Size Sensing	No
• Paper Out Sensing	Yes
• Paper Low Sensing	No

See “Loading a Paper Tray” on page 146 for instructions on loading any of the standard or optional paper trays. See “Multipurpose Feeder” on page 157 for instructions on using the multipurpose feeder. See “Envelope Feeder Option” on page 261 for information on installing the envelope feeder and loading envelopes in the envelope feeder.

Paper Source Specifications

Source	Media	Standard Sizes (width by length)		Universal Sizes (width by length)	
		Minimum	Maximum	Minimum	Maximum
250-sheet tray	Plain paper[1]	148 x 210 mm (5.83 x 8.27 in.)	215.9 x 355.6 mm (8.5 x 14 in.)	139.7 x 210 mm (5.5 x 8.27 in.)	215.9 x 355.6 mm (8.5 in. x 14 in.)
500-sheet tray	Plain paper[1]	148 x 210 mm (5.83 x 8.27 in.)	215.9 x 355.6 mm (8.5 x 14 in.)	139.7 x 210 mm (5.5 x 8.27 in.)	215.9 x 355.6 mm (8.5 x 14 in.)
Multi-purpose Feeder	Plain paper[1]	148 x 210 mm (5.83 x 8.27 in.)	215.9 x 355.6 mm (8.5 x 14 in.)	69.85 x 127 mm (2.75 in. x 5 in.)	229 x 355.6 mm (9.01 x 14 in.)
Multi-purpose Feeder	Plain envelopes	98.4 x 190.5 mm (3.875 x 7.5 in.)	176 x 250 mm (6.93 x 9.84 in.)	98.4 x 190.5 mm (3.87 x 7.5 in.)	176 x 250 mm (6.93 in. x 9.84 in.)
Envelope Feeder	Plain envelopes	98.4 x 190.5 mm (3.875 x 7.5 in.)	176 x 250 mm (6.93 x 9.84 in.)	98.4 x 162 mm (3.87 in. x 6.38 in.)	176 x 250 mm (6.93 in. x 9.84 in.)

[1] Plain paper refers to paper, transparencies, card stock, and labels. For more information on the weight of print materials, see page 125.

Note: The duplex option supports all standard sizes loaded into all sources except the envelope feeder. It supports Universal sizes within the limits of 148 x 182 mm (5.83 x 7.17 in.) as the minimum and 215.9 x 355.6 mm (8.5 x 14 in.) as the maximum.

Note: If you load paper that is narrower than 148 mm (5.83 in.) in the multipurpose feeder, such as 3x5 inch index cards, you need to set the **PAPER SIZE** menu item to **Universal**.

Paper Size Specifications

The following list includes the paper sizes you can select from the **PAPER SIZE** menu. If you use a paper size not listed, select the next larger size.

Paper Size Name	Dimensions
A4	210 x 297 mm (8.27x 11.7 in.)
A5	148 x 210 mm (5.83 x 8.27 in.)
JIS B5	182 x 257 mm (7.17 x 10.1 in.)
Letter	215.9 x 279.4 mm (8.5 x 11 in.)
Legal	215.9 x 355.6 mm (8.5 x 14 in.)
Executive	184.2 x 266.7 mm (7.25 x 10.5 in.)
Universal[1] (maximum from tray)	215.9 x 355.6 mm (8.5 x 14 in.)
Universal (maximum from multipurpose feeder)	229 x 355.6 mm (9.01 x 14 in.)

[1] When you select **Universal**, the page is formatted for 215.9 x 355.6 mm (8.5 x 14 in.) unless the size is specified by your software application.

Note: The duplex option supports all standard sizes. It supports Universal sizes within the limits of 148 x 182 mm (5.83 x 7.17 in.) as the minimum and 215.9 x 355.6 mm (8.5 x 14 in.) as the maximum.

Envelope Size Specifications

Envelope sizes in the following table are displayed in the **PAPER SIZE** menu when you select **Env Feeder**, **MP Feeder Size**, or **Manual Env Size** as the paper source. **Env Feeder** refers to the optional envelope feeder.

Envelope Size Name	Dimensions
7¾ Envelope	98.4 x 190.5 mm (3.875 x 7.5 in.)
9 Envelope	98.4 x 225.4 mm (3.875 x 8.9 in.)
10 Envelope	104.8 x 241.3 mm (4.12 x 9.5 in.)
DL Envelope	110 x 220 mm (4.33 x 8.66 in.)
C5 Envelope	162 x 229 mm (6.38 x 9.01 in.)
B5 Envelope	176 x 250 mm (6.93 x 9.84 in.)
Other Envelope	When you select **Other Envelope**, the page is formatted for 215.9 x 355.6 mm (8.5 x 14 in.), unless a size is specified by your software application. Your printer supports envelope sizes up to B5.

Tray Linking

If you are using the same size and type of print material in all paper sources (trays), tray linking enables the automatic linking feature for trays.

For example, if you have an Optra S 2455 with two optional trays attached, and you have 215.9 x 279.4 mm (8.5 x 11 in.) size print material loaded into Trays 1 through 5 respectively and paper types are set the same, if one tray becomes empty, the printer selects print material from another tray since the printer sees the trays as linked.

If you load the same size print material in each tray, make sure the print material is all the same type. If you use different print material in the trays, each source with a different print material must have the PAPER TYPE set to a unique value to disable the

automatic linking feature. For example, if you did not make sure all trays have the same type when they are linked, you could send a report to print and if you have letterhead paper loaded into one tray, you could print the report on letterhead paper.

Paper Loading

Proper paper loading prevents paper jams and ensures trouble-free printing.

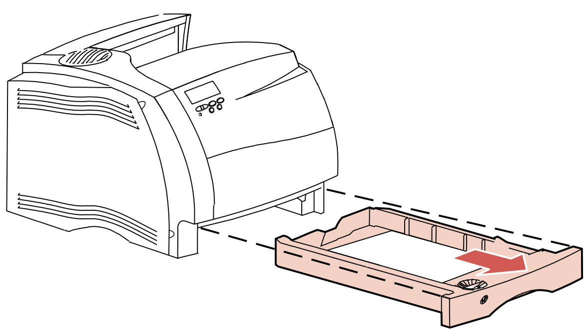
Do not remove paper trays while a job is printing or **Busy** is displayed on the operator panel. Doing so may cause a paper jam.

Before loading paper, you need to know the recommended print side of the paper you're using. This information is usually indicated on the paper package.

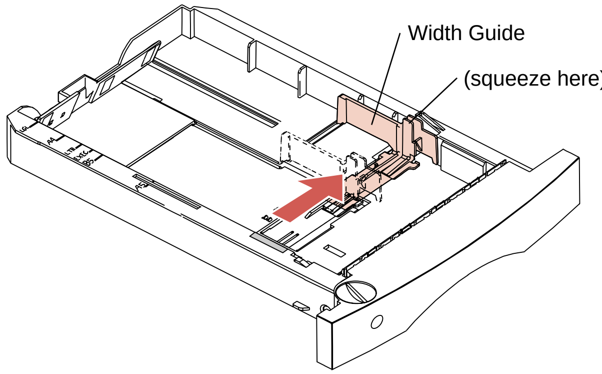
Loading a Paper Tray

Complete these instructions to load paper, card stock, labels, or transparencies in any of the standard or optional trays.

1 **Remove the paper tray.** If you want to load an optional tray, pull it straight out and remove it completely from its support unit.

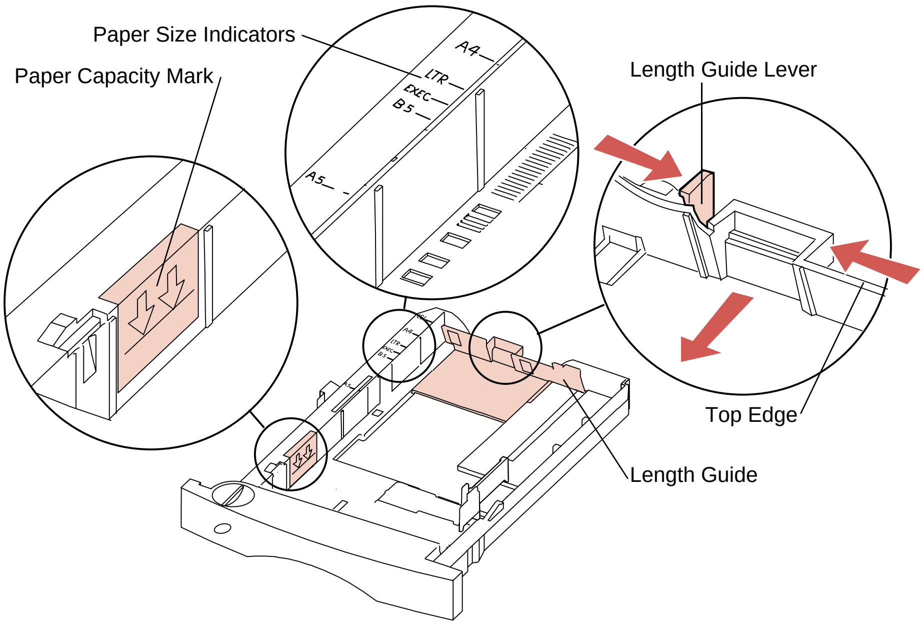


2 **Squeeze the width guide lever and slide the width guide to the far right side of the tray.**



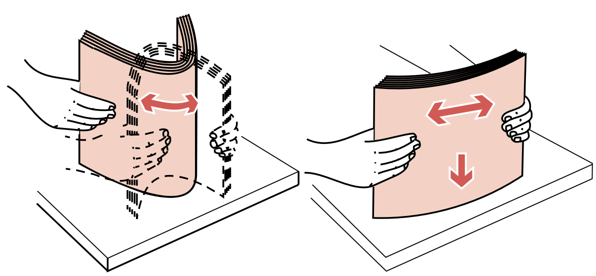
Note: Before you put paper in the tray, adjust the tray size for your paper. This example shows how to adjust for letter size paper (LTR). Notice the *paper size indicators* printed on the top left surface of the tray. These abbreviations indicate the paper sizes. The paper size indicators help you in the placement of the length guide.

3 **Squeeze the length guide lever and slide the length guide to the correct position for the paper size you are loading.**

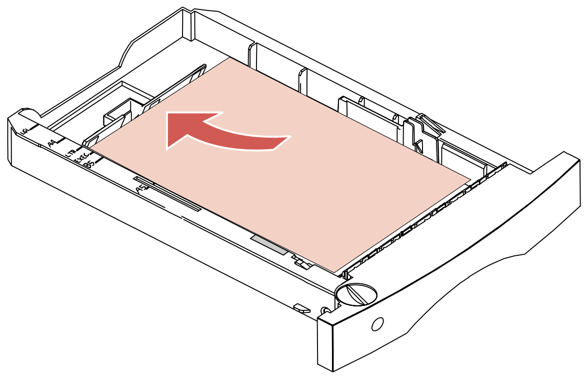


Note: Do not fill paper above the paper capacity mark (fill line) on the left inside wall of the paper tray. The top edge of the length guide serves as a fill line, also. If the paper stack exceeds the full level, the excess paper is pushed out the front of the tray when you install the tray.

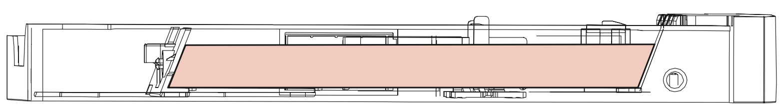
4 **Flex the paper back and forth.** Do not fold or crease the paper. Straighten the edges on a level surface**.**



5 **Place the paper into the paper tray with the recommended print side face down and the bottom edge going in first toward the paper length guide.** Do not overload. Use the paper capacity mark and the top edge of the length guide as a reference for filling the tray.

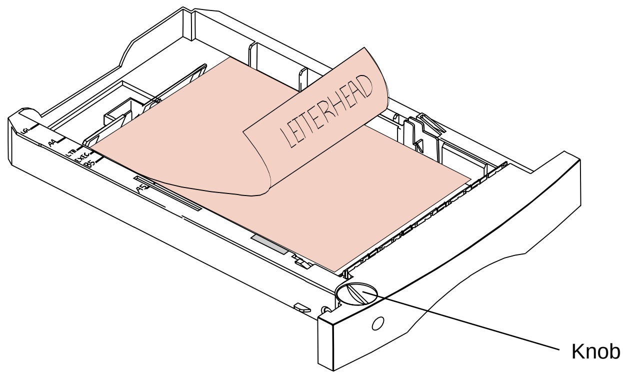


When the paper is loaded into the tray, the paper is stacked at an angle. The paper tray wall at the front of the tray is angled as this cross-section of the tray illustrates. If you readjust the length guide lever once the paper is in the tray, do not push it too far. Pushing the length guide too far causes the paper to move up along this angled wall and jam.

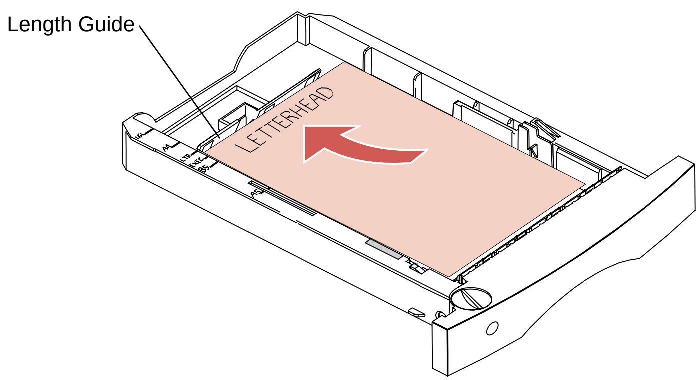


Note: If you set the Paper Size to Universal for odd paper sizes, you need to move the length guide until the leading edge of the paper looks angled against the paper tray wall.

For *simplex* (single-sided) printing on letterhead paper, place the printed design side *face down* with the top edge of the page nearest the knob for the paper size indicator.

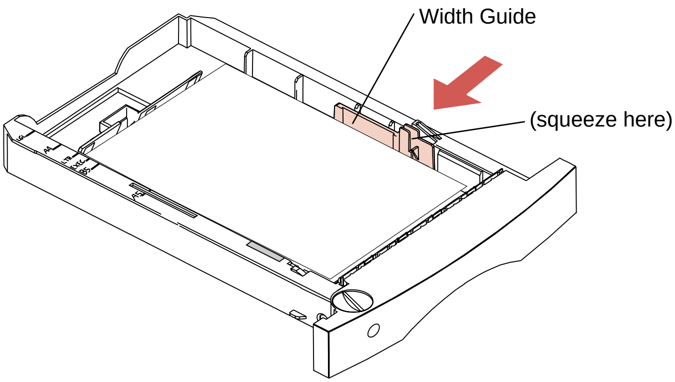


For *duplex* printing on letterhead paper, place the printed design side *face up* with the top of the page nearest the length guide.

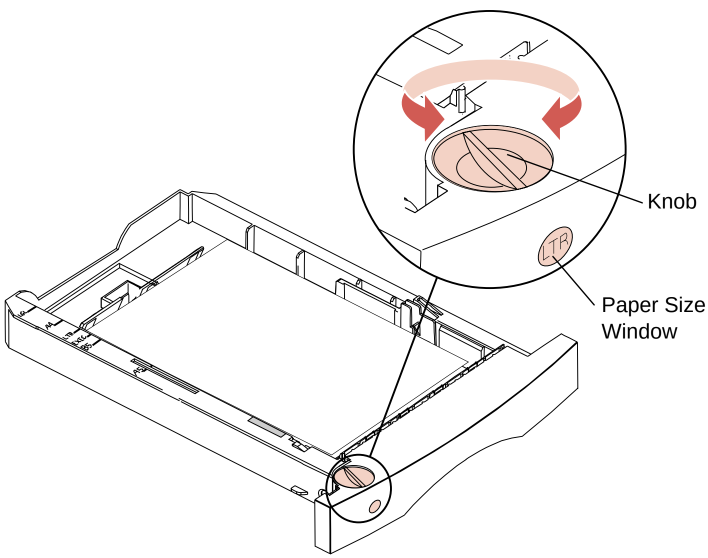


Using Print Materials

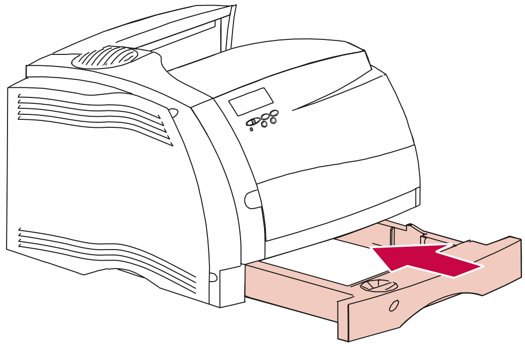
6 **Squeeze the width guide lever and slide the width guide to the left until it lightly rests against the edge of the paper stack.**



7 **Turn the knob for the paper size window to show the size of the paper you are loading, for example, LTR.** This serves as a visual reminder of the paper size currently loaded.



8 Slide the paper tray in until it snaps into place.



Duplexing (Two-Sided Printing)

When you install the duplex option, you can print on both sides of most high-quality xerographic copier papers, office papers, and selected bond papers. For best results, use only non-recycled xerographic paper.

Note: Papers suitable for duplexing may be loaded into all standard or optional trays, and the multipurpose feeder.

Duplexing can place heavy demands on printer memory. However, the standard memory installed in your printer is sufficient for most duplexed jobs printed at 600 dpi. Duplexing very complex jobs, particularly when the print resolution is set to 1200, may require optional memory.

When duplexing, side two is always printed first to ensure your pages are properly collated in the standard output bin.

When you're duplexing preprinted forms—such as letterhead paper—from one of the paper trays, place the paper in the tray *face up*. See page 150. (Since letterhead must be placed face down for single-sided printing, you may want to reserve one tray for letterhead that you want to duplex.)

See "Installing the Duplex Option" on page 273 for more information.

Paper Exits (Output Bins)

The following table gives information on standard and optional paper exits for your printer model:

Exit	Optra S 1255 and Optra S 1625	Optra S 1855	Optra S 2455
Standard Bin located on top of the printer Note: Referred to as **Standard Bin** for the **Output Bin** setting in the **PAPER MENU**.	Holds 250 sheets[1]	Holds 250 sheets[1]	Holds 500 sheets[1]
Optional output expander Note: Referred to as **Bin 1**, **Bin 2**, and **Bin 3** depending on the number of optional output expanders installed for the **Output Bin** setting in the **PAPER MENU**.	None	You may install up to three output expanders.[2]	You may install up to three output expanders.[2]

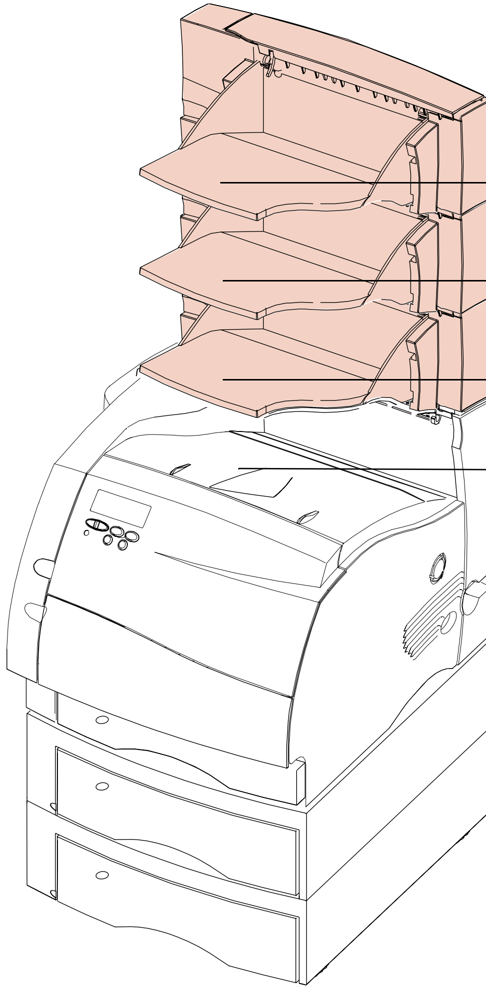
[1] Printer model handles collated output to the standard output bin.

[2] Printer model handles collated output to each optional output expander. Each optional output expander holds approximately 650 sheets. The output expander handles 60 to 131 g/m^2 (16 to 35 lb bond) paper.

Note: See page 125 for a listing of acceptable print materials and weights.

Using Print Materials

The following illustration shows standard and optional (highlighted) paper exits for the Optra S 2455.



See “Installing an Optional Output Expander” on page 282 for more information.

Tips for Avoiding Paper Jams

By carefully selecting print materials and loading them properly, you should be able to avoid most paper jams. If jams do occur, follow the steps outlined in “Clearing Jams” starting on page 209. If jams occur frequently, make sure you are following these tips to avoid jams.

- Follow the procedures in “Loading a Paper Tray” on page 146 to load paper properly. Make sure the adjustable guides are positioned correctly.
- Do not overload the paper trays. Make sure the paper is under the paper capacity mark on the inside of the paper tray.
- Do not remove paper trays while print jobs are in process.
- Flex, fan, and straighten the paper before loading it.
- Fan stacks of labels or transparencies before loading them into trays or the multipurpose feeder. If jams do occur using the multipurpose feeder, try feeding one sheet at a time.
- Do not load wrinkled, creased, damp, or highly curled paper.
- Do not mix paper types in one tray.
- Use only recommended print materials. See “Print Materials” on page 124.
- Make sure the recommended print side is face down for simplex printing when loading all trays.
- Keep print materials stored in an acceptable environment. See “Moisture Content” on page 127.

Multipurpose Feeder

Chapter 5

The multipurpose feeder, located on the front of the printer, is standard on the Optra S 1855, Optra S 1625, and Optra S 1255. It can be closed when you are not using it, making the printer more compact.

The multipurpose feeder can hold several sizes and types of paper, such as transparencies, post cards, note cards, and envelopes. You may also want to use the multipurpose feeder for single page print jobs on letterhead, colored paper for use as separator sheets, or other special paper you do not keep in a paper tray.

You can load approximately 100 sheets of 75 g/m^2 (20 lb) paper of a specific size at a time. You can load approximately 12 envelopes at a time. You can load approximately 75 transparencies at a time. The maximum stack height for the loading of any print material is 10 mm (0.4 in.). Print material is loaded face up in the multipurpose feeder except when you load letterhead paper for duplex printing. The multipurpose feeder accepts print material within the following dimensions:

	Minimum	Maximum
Width	69.85 mm (2.75 in.)	229 mm (9.01 in.)
Length	127 mm (5 in.)	355.6 mm (14 in.)

Before loading print materials in the multipurpose feeder, make sure you select the paper size and paper type from the printer operator panel for the **MP Feeder**. When you print from the multipurpose feeder, also select the paper size and paper type from your software application for the print material you have loaded.

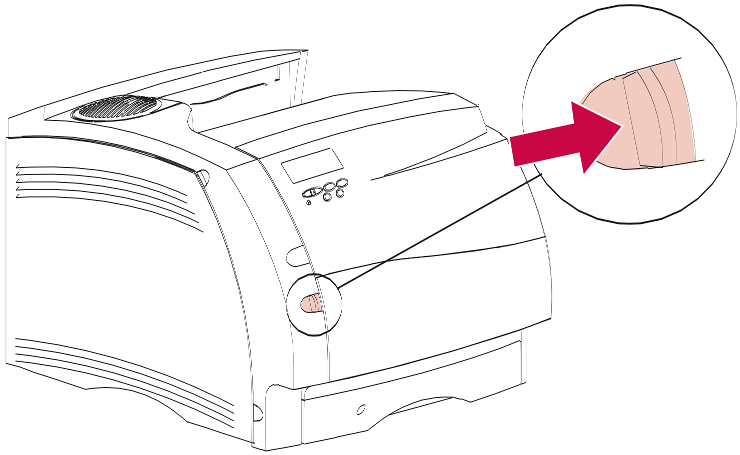
Multipurpose Feeder Guidelines

- Load only one size of paper or envelopes at a time in the multipurpose feeder.
- To achieve the best possible print quality, use only high-quality print media that is designed for use in laser printers. For more guidelines on paper, see “Print Materials” on page 124.
- To prevent paper jams, do not add paper when there is still paper in the multipurpose feeder. This applies to other types of print materials, too.
- Print material should be loaded face up with the top of the print material going into the multipurpose feeder first.
- Do not place objects on the multipurpose feeder. Also, avoid pressing down or applying excessive force on it.

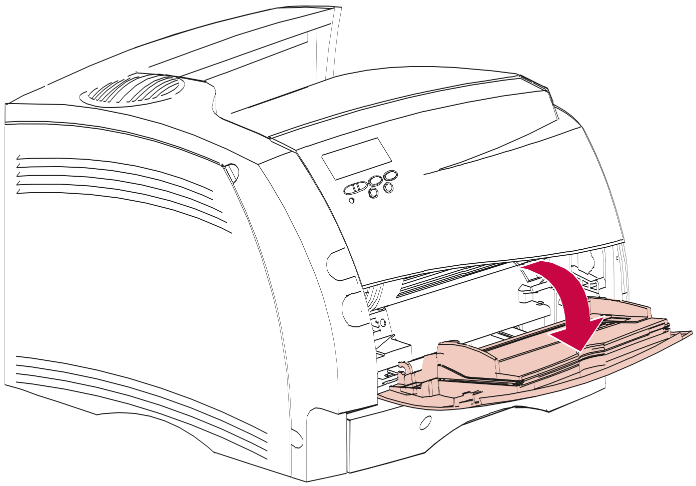
Note: The multipurpose feeder may be used with the optional envelope feeder installed.

Opening the Multipurpose Feeder

1 **Push the lower release latch on the front left side to the right to release the multipurpose feeder door (lower front door).**



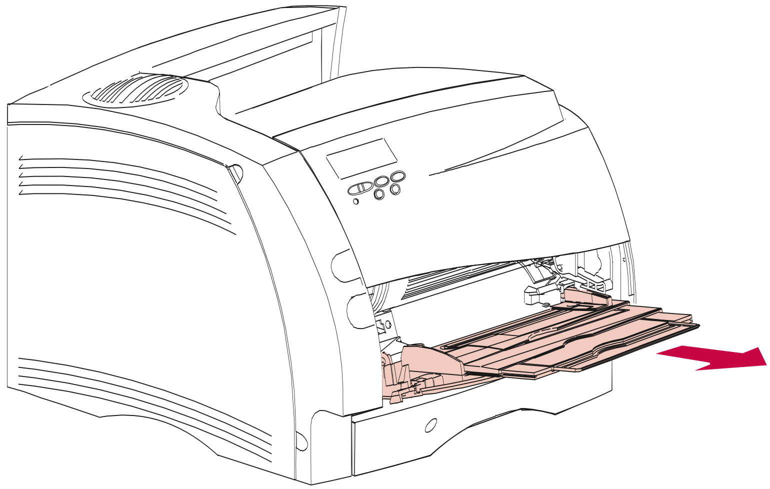
The multipurpose feeder door drops open and stops in place.



Multipurpose Feeder

2 **Locate the metal bar in the recessed area on the multipurpose feeder.**

3 **Pull the metal bar straight out to extend the multipurpose feeder to its full-length position to hold longer paper.**



Loading the Multipurpose Feeder

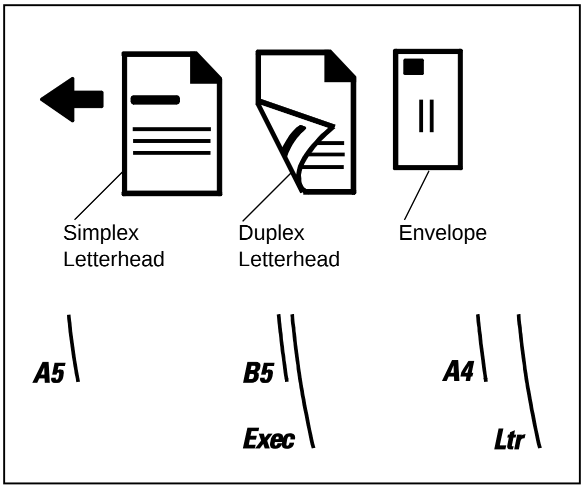
Proper loading prevents paper jams and ensures trouble-free printing.

Do not remove any paper tray while a job is printing from the multipurpose feeder or **Busy** is displayed on the operator panel. Doing so may cause a paper jam.

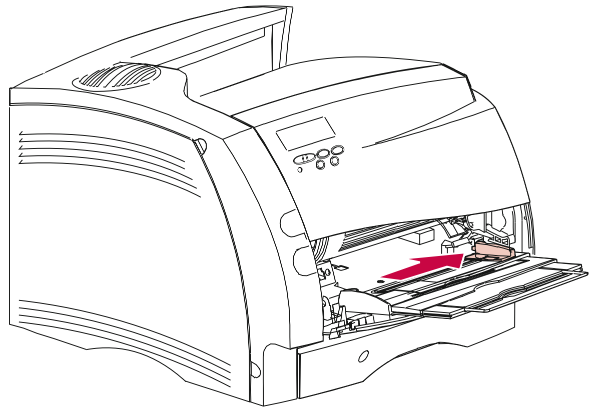
Never add print materials to the multipurpose feeder while the printer is printing from the multipurpose feeder. Doing so may cause a paper jam.

Before loading paper, you need to know the recommended print side of the paper you are using. This information is usually indicated on the paper package.

1 **Notice the icons on the multipurpose feeder surface.** These icons show you how to load the multipurpose feeder with paper, how to turn an envelope for printing, and how to load letterhead paper for simplex and duplex printing.

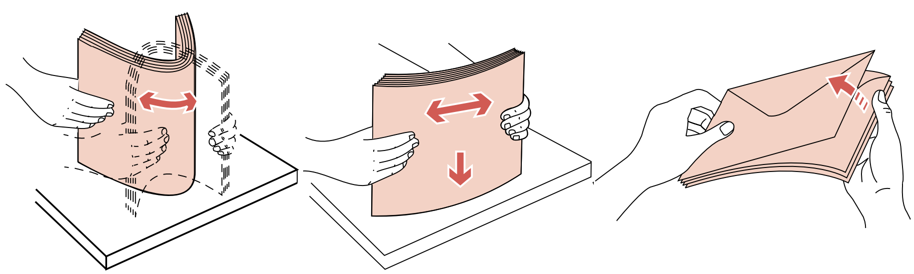


2 Slide the colored paper width guide to the far right on the multipurpose feeder.



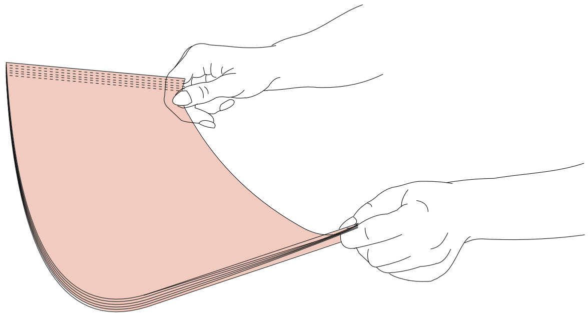
3 Prepare the print material for loading.

- For paper and envelopes:
  - **Flex paper or fan envelopes back and forth**. Do not fold or crease the paper. Straighten the edges on a level surface.

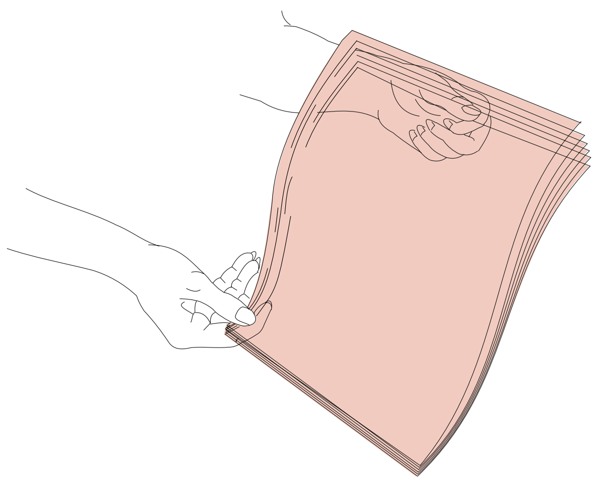


Note: If envelopes jam while printing, try reducing the number of envelopes in the multipurpose feeder.

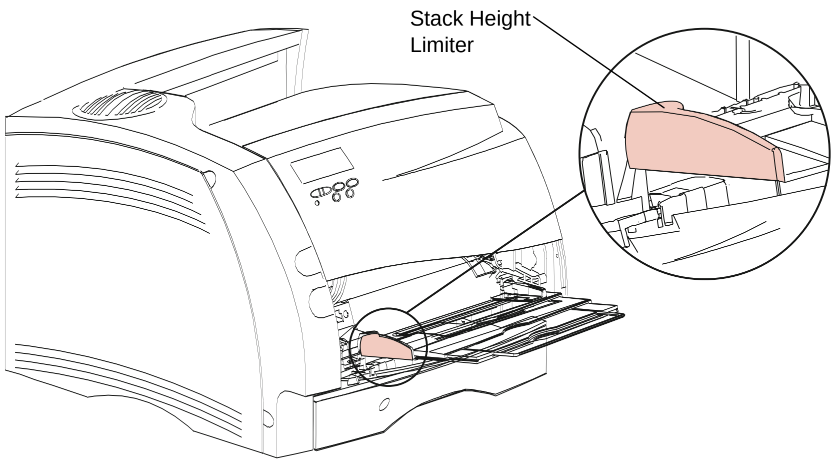
- For transparencies:
  - **Hold the transparencies by the edges and avoid touching the print side.**



  - **Fan the stack of transparencies to prevent feeding failures.** Be careful not to scratch or leave fingerprints on the print sides.

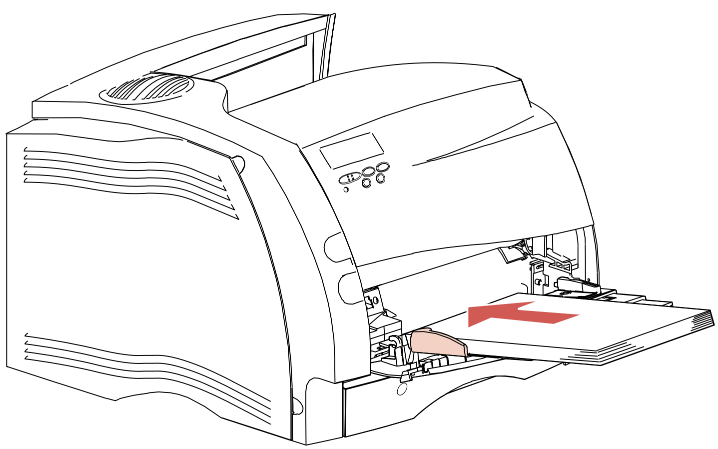


4 **Notice the print materials stack height limiter on the left side of the multipurpose feeder.** Use it as a guide for stack height when loading print materials.

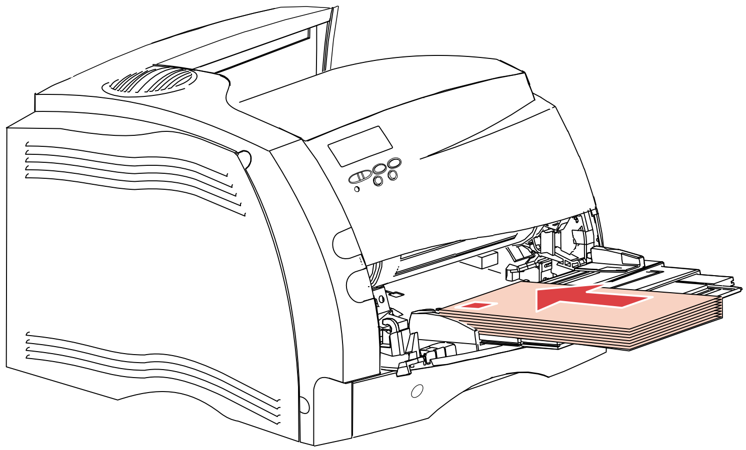


5 **Load one type of print material in the multipurpose feeder. Do not mix types. See the following directions to load each type of print material.**

- Load paper with the left edge of the stack against the stack height limiter and with the recommended print side face up.



- Load envelopes with the flap side down. The stamp area and flap are on the left side. The end of the envelope with the stamp area enters the multipurpose feeder first.

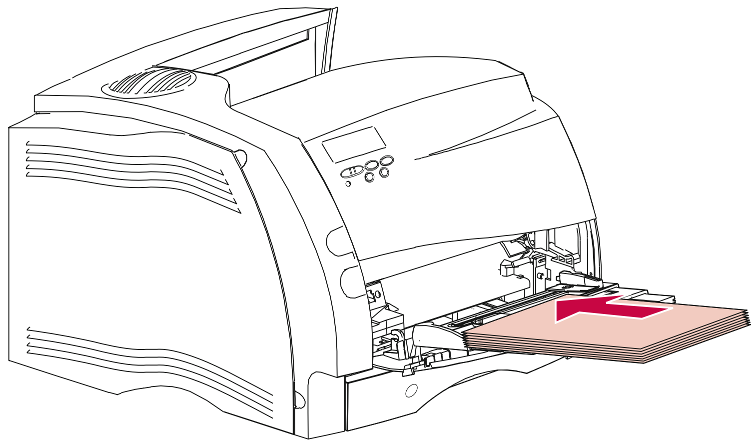


Note: Do not feed stamped envelopes. The stamp is shown for placement only.

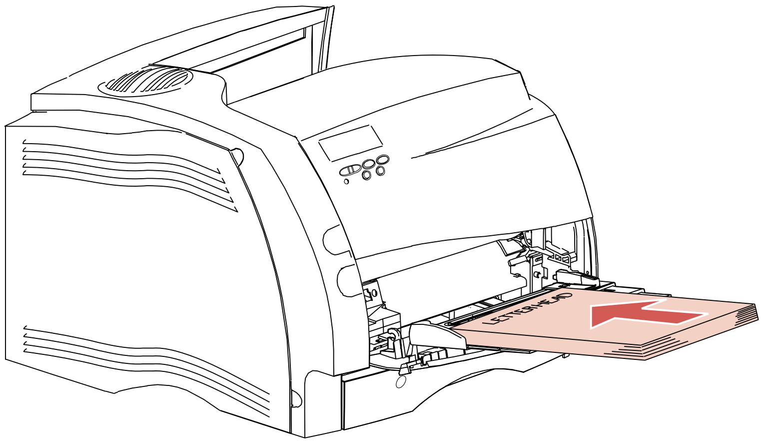
WARNING: Never use envelopes with clasps, snaps, windows, coated linings, or self-stick adhesives. These envelopes may severely damage the printer.

Multipurpose Feeder

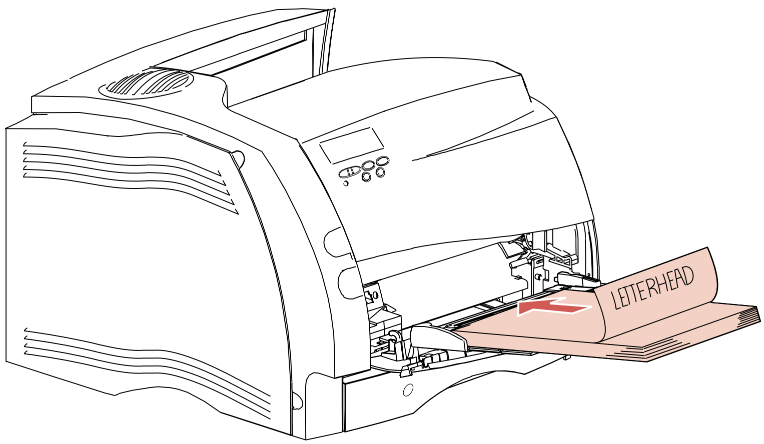
- Load transparencies with the left edge of the stack against the stack height limiter.



- Load letterhead paper for *single-sided* printing with the design face up. The top edge of the sheet with the logo should enter the printer first.

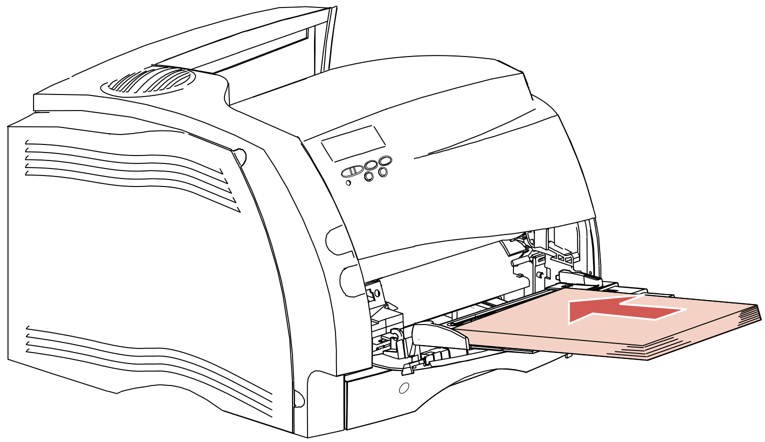


- Load letterhead paper for *duplex* printing with the design face down. The top edge of the sheet with the logo should enter the printer last.



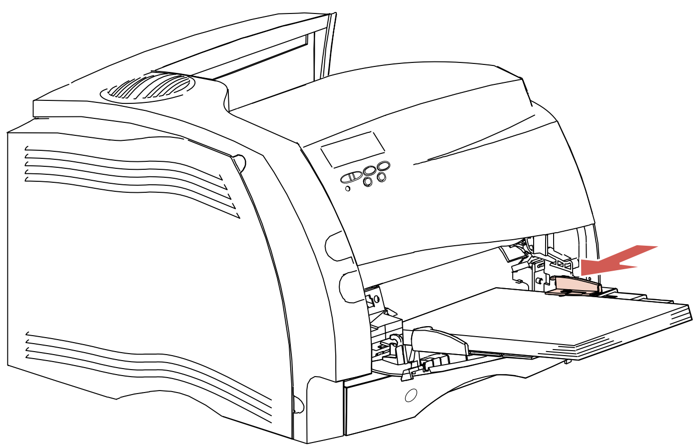
Note: See “Print Materials” on page 124 for information on selecting types of print materials.

6 **Slide the print material into the multipurpose feeder as far as it will go.** Do not force it. Forcing causes buckling of the print material.



7 **Make sure you have not loaded too much print material.** The stack should fit loosely under the stack height limiter. The print material buckles if you load a stack that is too deep or push the stack in too far.

8 **Slide the paper width guide to the left until it lightly touches the stack of print material.** Do not bend the print material.



Using the Multipurpose Feeder

After loading print material in the multipurpose feeder, select the paper source from your software application, and then select the paper size and type from both your software application and from the printer operator panel.

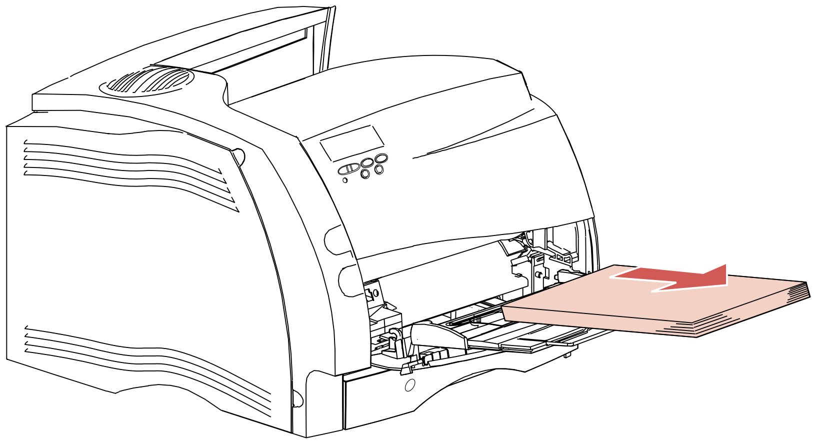
To set the printer operator panel:

1. **Make sure the PAPER SIZE for the multipurpose feeder (MP Feeder Size) is set to the correct size paper, envelope, or other print material you are loading.**
2. **Make sure the PAPER TYPE for the multipurpose feeder (MP Feeder Type) is set to the correct value for the print material you are loading.**
3. **Press Go to return the printer to the Ready status message.**

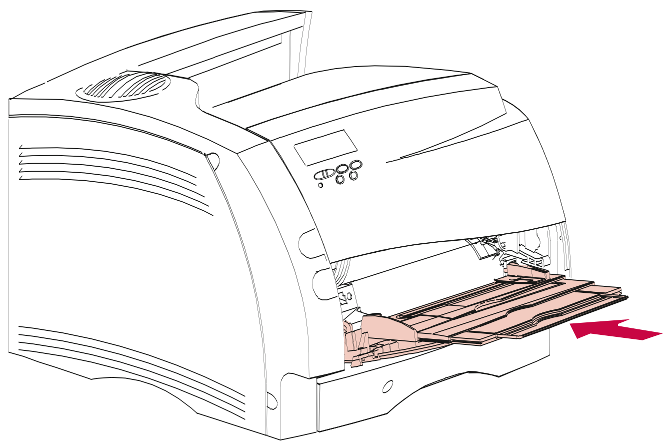
Note: Software settings may override operator panel settings.

Closing the Multipurpose Feeder

1 **Remove print material from the multipurpose feeder.**



2 **Push the metal bar straight back to collapse the multipurpose feeder to its short-length position.**



3 **Close the multipurpose feeder door.**

Receive-only Fax

Chapter 6

If your printer has a serial port installed and it is not in use, you can use your printer to receive faxes. Outgoing faxes are not supported.

Note: Although some Optra S models may be configured with multiple serial ports, the activation of more than one fax port is not permitted.

Note: Any time you want use the receive-only fax serial port for a different purpose, you must first follow the instructions for disabling receive-only fax on page 173. If you decide to reactivate receive-only fax, make sure you follow the instructions for receive-only fax setup on page 172. *Never attempt to configure your serial port for multiple uses with an A-B switch.*

Hardware Needed

To use your printer serial port to receive incoming faxes, you need an external, class 1 fax modem. You can use virtually any brand, as long as it is a class 1 fax modem.

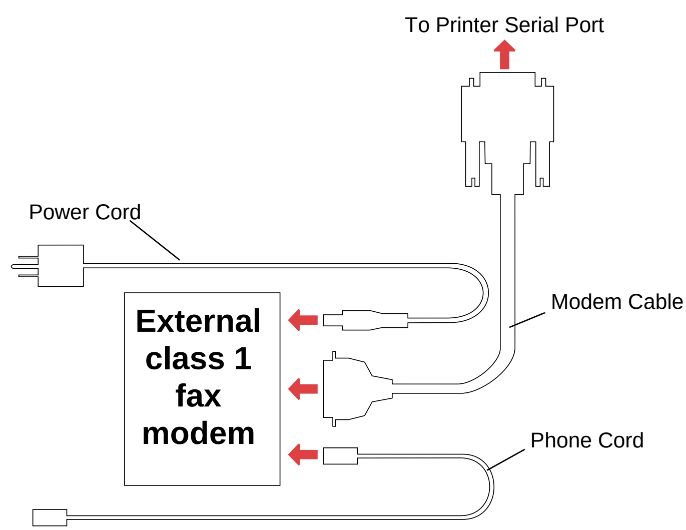
Receive-only Fax Setup

1 **Turn the printer power Off (O).**

2 **Turn the modem power Off.**

3 **Physically connect the hardware.** Consult the class 1 fax modem documentation for details.

Note: Instead of connecting the class 1 fax modem to a computer, you connect it to the serial port of your printer. The end of the modem cable that connects to the serial port must be 25-pin.



4 **Turn the modem power On.** It is very important that you power on the modem *before* you power on the printer.

5 **Turn the printer power On (|).**

6 **From the operator panel, select FAX MENU, Fax Port. Select the serial port connected to the modem.** For more information on FAX MENU settings, see "Fax Menu" on page 119.

The printer is now ready to receive faxes.

Receive-only Fax

Note: If power to the modem is interrupted you must complete the following steps, *in order*, for your printer to receive faxes:

1. Turn the printer power Off (O).
2. Turn the modem power On.
3. Turn the printer power On (|).

Disabling Receive-only Fax

To disable the Receive-only Fax function and restore the printer serial port to normal use, complete the following steps:

1. **From the printer operator panel, select FAX MENU, Fax Port, Disable.** Wait for the printer to reset.
2. **Turn the modem power Off.**
3. **Turn the printer power Off (O).**
4. **Disconnect the modem cable from the printer serial port.**
5. **Turn the printer power On (|).**

Caring for Your Printer

Understanding Printer Messages

Chapter 7

This chapter describes the various messages that may appear on your printer operator panel display. Status messages give information about the current state of the printer. Attendance messages indicate printer errors that you must resolve. Service messages indicate printer failures that may require servicing.

Status Messages

The first line (line 1) on the display provides information on the current state or status of the printer, as shown in the table beginning on page 178. However in some cases, a message is long enough that it requires both lines to display the entire message. Usually, the second line (line 2) on the display provides additional information about printer status. See “Line 2 Messages” on page 182.

Line 1 Messages

Status Message	Meaning and Actions Allowed While Message is Displayed
Activating Menu Changes	The printer is reset to activate a printer setting changed in the menus. No button actions are possible while this message is displayed.
Busy	The printer is busy receiving or processing data, or printing data. The display shows one of the following items on line 1 while the printer processes data: • a PJL RDYMSG, if it is defined • an NPA job name if one is defined • the printer language Note: The printer indicator light blinks while the printer is processing data. • Press **Stop** to take the printer out of **Busy**. The **Not Ready** message is displayed. No more data is processed, but the printer processes all paper currently in the printer paper path. Press **Go** to return to **Busy**. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**. Note: A customized message may be displayed instead of Busy if you use the PJL RDYMSG command, a Printer Job Language message. For more information, refer to the *Technical Reference*.
Files will be Lost. Go/Stop?	This message is displayed when you have changed the Job Buffer Size setting on the operator panel. The printer must reformat the hard disk. The message asks for confirmation to continue and erase all files on the hard disk. Press **Go** to continue. The hard disk is formatted and the specified job buffer partition is created. The message **Format Disk** displays while the hard disk formats. Press **Return** or **Stop** to cancel this operation.
Flushing Buffer	The printer is flushing corrupted print data and the current print job is being discarded. No button actions are possible while this message is displayed.
Formatting Flash **DO NOT POWER OFF**	The flash memory is being formatted. No button actions are possible while this message is displayed.

Status Message	Meaning and Actions Allowed While Message is Displayed
Formatting Disk	The hard disk is being formatted. No button actions are possible while this message is displayed.
Menus Disabled	The printer menus have been disabled. This message is displayed when **Menu>** or **<Menu** is pressed while the printer is **Ready**. See "Disabling the Operator Panel Menus" on page 121 for more information about Menu Disable. No button actions are possible while this message is displayed.
Network Card Busy	The printer tells you that you have tried to enter the Network x Setup menu while the network card is processing a reset. (x represents the slot where the network card is located.) No button actions are possible while this message is displayed.
Not Ready	The printer is in the Not Ready state, which means it is not ready to receive or process data. • Press **Go** to take the printer out of the Not Ready state. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
Performing Self Test	The printer is running the normal series of start-up tests after it is powered On (|). When the tests are complete, the printer returns to **Ready**. No button actions are possible while this message is displayed.
Power Saver	The printer is in Power Saver mode. • Press **Go** to quick start the printer. • Press **Menu>** or **<Menu** to enter all menus. • Press **Stop** to take the printer offline. The **Not Ready** message is displayed. No data is processed. Press **Go** to return the printer to **Power Saver**.

Status Message	Meaning and Actions Allowed While Message is Displayed
Printing Directory List **Printing Font List** **Printing Menu Settings**	A directory of the flash and hard disk contents is processing or printing. The printer is processing or printing a font listing. The printer is processing or printing a list of the printer user default settings and installed options. • Press **Stop** to take the printer offline. The **Not Ready** message is displayed. No more data is processed, but the printer processes all paper currently in the printer paper path. Press **Go** to return to the previous message. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
Program Flash **DO NOT POWER OFF**	The flash memory is being programmed, which means fonts or macros are being written to flash memory. Do not perform any button actions while this message displays.
Programming Disk **DO NOT POWER OFF**	The hard disk is being programmed, which means fonts or macros are being written to the hard disk. No button actions are possible while this message is displayed. Note: If information is written to flash memory and to hard disk at the same time, the Program Flash message is displayed.
Ready	The printer is ready to receive and process data. • Press **Menu>** or **<Menu** to take the printer out of Ready and enter all menus. • Press **Stop** to take the printer offline. The **Not Ready** message is displayed. No data is processed. Press **Go** to return the printer to **Ready**. Note: A customized message may be displayed instead of Ready if you use the PJL RDYMSG command, a Printer Job Language Ready message. For more information, refer to the *Technical Reference*.
Ready Hex	The printer is ready and Hex Trace mode is active. Hex Trace isolates the source of a print job problem. With Hex Trace selected, all data sent to the printer is printed in hexadecimal and character representation. Control codes are not executed. To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.

Status Message	Meaning and Actions Allowed While Message is Displayed
Res Reduced	The resolution of the page is reduced from 600 dots per inch (dpi) to 300 dpi to prevent a 38 Memory Full error. 1200 dpi pages do not undergo resolution reduction. If a 1200 dpi print job runs out of memory, a 38 Memory Full error occurs. **Res Reduced** displays for the duration of the current job.
Resetting the Printer	The printer is deleting any print jobs in process and restoring all printer settings to user defaults. No button actions are possible while this message is displayed.
Restoring Factory Defaults	The printer is restoring factory defaults. See page 79 for details about which printer settings are affected. No button actions are possible while this message is displayed.
Waiting	The printer has received a page of data to print, but is Waiting until an End of Job or Form Feed command occurs or until additional data is received. The display shows the printer language on line 1 to the right of **Waiting.** • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**. • To print the contents of the print buffer, press **Go**, **Menu>**, or **<Menu**. The **JOB MENU** displays. Press **Menu>** or **<Menu** until **Print Buffer** is on the second line. Press **Select**. See **Print Buffer** in **JOB MENU** on page 82 for more information. • Press **Stop** to take the printer out of **Waiting**. The **Not Ready** message is displayed. Press **Go** to return to **Waiting**.
Canceling Job	The printer is processing a request to cancel the current print job.

Line 2 Messages

The following are messages that appear on the second line of the display. Line 2 messages give information about printer status.

Status Message	Meaning
Check Config ID	The printer configuration identification (ID) is not set or is not valid. Call Lexmark Technical Support.
Infrared x	x is 1, 2, or 3 and represents the infrared port attached to connector x. The printer is locked onto the Infrared x host interface.
LocalTalk x	x is 1, 2, or 3 and represents the LocalTalk card attached to connector x. The printer is locked onto the LocalTalk x host interface.
Fax	The printer is processing a fax via the standard serial port.
Fax x	x is 1, 2, or 3 and represents the fax modem attached to connector x. The printer is locked onto the Fax x host interface.
Maintenance	The printer requires replacement of routine maintenance items to maintain top performance, and avoid print quality and paper feed problems. The message displays when the printer maintenance counter determines 250,000 pages have printed. These components are in a maintenance kit available from Lexmark. This message continues to display until the maintenance kit items are installed and your service provider resets the printer. For more information, see “Maintaining Your Printer” on page 247.
Network x	x is 1, 2, or 3 and represents the network card attached to connector x. The printer is locked onto the Network x host interface.
Parallel	The printer is locked onto the printer standard parallel host interface.
Parallel x	x is 1, 2, or 3 and represents the parallel port attached to connector x. The printer is locked onto the optional parallel x host interface.
Serial	The printer is locked onto the printer standard serial host interface.
Serial x	x is 1, 2, or 3 and represents the serial port attached to connector x. The printer is locked onto the optional serial x host interface.

Status Message	Meaning
Toner Low	The level of toner in the print cartridge is low. The message is cleared when the upper front door is opened. To utilize the remaining toner, remove the print cartridge and shake it gently. Reinstall the same print cartridge. See page 15 for directions to reinstall the print cartridge. Before the toner supply is depleted, the printer might display the **Toner Low** message again until you replace the print cartridge. You can repeat this process until the print quality becomes unacceptable.
Tray x Empty	x represents the number of the paper tray that is empty. If more than one tray is empty, the printer displays the message for the greater numbered tray first. This message does not display for the envelope feeder or the multipurpose feeder.
Tray x Low	x represents the number of the paper tray that has a low supply of print material. If more than one tray is low, the printer displays the message for the greater numbered tray first. This message does not display for the envelope feeder or the multipurpose feeder.
Tray x Missing	x represents the number of the paper tray that is missing from the printer or from its support unit. If more than one tray is missing, the printer displays the message for the lesser numbered tray first.

Attendance Messages

Attendance messages indicate printer errors that you must resolve. The messages are listed in numerical order.

Note: For paper jam errors, the entire paper path must be cleared of paper. See “Clearing Jams” on page 209 for more information.

Attendance Message	Meaning and Required Action
31 Defective Print Cartridge	The upper front door is closed and a defective print cartridge is installed. Open the upper front door and remove the defective print cartridge. Install another print cartridge.
32 Unsupported Print Cartridge	The upper front door is closed and an unsupported print cartridge is installed. Open the upper front door and remove the cartridge. Install an appropriate print cartridge.
34 Short Paper	The printer determines the paper length is too short to print the formatted data. This occurs when the printer does not know the actual paper size loaded in tray. For auto-size sensing trays, this error occurs if the paper stop is in the incorrect position. This message displays also if you selected Universal Size and the print material used is too short for the page format. Make sure the Paper Size setting in the Paper Menu is correct for the size paper you are using or if you select Universal Size, make sure your print material is large enough. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**. • Press **Go** to clear the error and continue printing.

Attendance Message	Meaning and Required Action
35 Res Save Off Deficient Memory	The printer lacks the memory needed to enable **Resource Save**. This message usually indicates that too much memory is allocated for one or more of the printer link buffers. To enable **Resource Save** after this message displays, either install additional memory or set each link buffer back to the Auto value. Once all link buffers are set to Auto, exit the printer menus to activate link buffer changes. When **Ready** displays, enable **Resource Save** in the **SETUP MENU** and modify the link buffers again. Press **Go** to clear the message. The printer automatically disables Resource Save and continues.
37 Insufficient Collation Area	The printer memory used to store pages of data is too full to collate the rest of the print job. • Press **Go** to clear the message. The printer collates the job in segments. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
37 Insufficient Defrag Memory	The printer memory used to store undeleted flash resources is too full to perform the Flash Memory Defragment operation. • Press **Go** to clear the message. • To perform the defragment operation, you can: - Delete fonts, macros and other data in printer RAM - Install additional printer memory.

Attendance Message	Meaning and Required Action
38 Memory Full	The printer is processing data, but the memory used to store pages is full. Reduce the complexity of the page and send it to print again. To reduce the complexity of the page: • Simplify the print job by reducing the amount of text or graphics on a page. • Reduce the print resolution. • Delete unnecessary downloaded fonts or macros. • Install additional memory. The following button actions are possible: • Press **Go** to clear the message. The printer continues printing the job; however, some data may not print or may not print correctly. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
39 Complex Page	The amount of text, graphics, and print information on the page is very complex; therefore, the page may not print correctly. • Set **Page Protect** in the **SETUP MENU** to **On** and send the print job again. • Press **Go** to clear the message. The printer continues printing the job; however, some data may not print or may not print correctly. Try to simplify your print job. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
51 Defective Flash	The printer detects a defective flash during power on, or during format and write to flash operations. If the flash is read / write protected, use MarkVision to restore write access. • Remove the defective flash memory card and try another. Press **Go** to clear the message. Flash operations are not allowed until the problem is resolved.

Attendance Message	Meaning and Required Action
52 Flash Full	There is not enough free space in the flash memory card to hold the data that was sent. If the flash is read / write protected, use MarkVision to restore write access. • Press **Go** to clear the message and continue processing. All downloaded fonts and macros not written to flash are deleted. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
53 Unformatted Flash	The printer detects an unformatted flash memory card during the power on process. Note: Flash operations are not allowed until the flash is formatted. Try the following: • Format the flash memory card using **Format Flash** in the **TESTS MENU**. • Send the data again. If the error condition remains, the flash memory card is defective and must be replaced. Press **Go** to clear the message. The flash memory is ignored and normal operation continues.

Attendance Message	Meaning and Required Action
54 Standard Serial Error **54 Serial Option x Error** **54 Std Par ENA Connection Lost** **54 Par x ENA Connection Lost**	A serial interface error is detected (framing or parity) on the standard serial port. This error usually indicates the serial link has not been set up correctly. A serial interface error is detected (framing or parity). x represents an optional serial port 1 through 3. This error usually indicates the serial link has not been set up correctly. When the serial error is displayed, the reporting of other serial errors is suppressed until interface parameters are changed or the printer is turned off. A protocol error is detected on the parallel host interface. When the parallel error is displayed, the reporting of other interface errors is suppressed until interface parameters are changed or the printer is turned off. Check the interface: • Verify that the correct cable is used. • Make sure the parallel or serial interface parameters (protocol, baud, parity, data bits) are correct. The following button actions are possible: • Press **Go** to clear the message and continue printing the job. The print job may not print correctly. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
56 Standard Serial Disabled **56 Serial Port x Disabled**	Data is sent to the printer across the serial port, but the serial port is disabled. When the serial error is displayed, the reporting of other serial errors is suppressed until the menus are entered or the printer is reset. Note: This error is not detected for optional serial ports contained on an optional Tri-Port interface card. • Make sure the **Serial Buffer** menu item in the **SERIAL MENU** is not set to **Disabled**. • Press **Go** to clear the message. The printer discards any data received on the serial port. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.

Attendance Message	Meaning and Required Action
56 Standard Parallel Port Disabled **56 Parallel Port x Disabled**	Data is sent to the printer across the parallel port, but the parallel port is disabled. When the error is displayed, the reporting of other errors is suppressed until the menus are entered or the printer is reset. • Make sure the **Parallel Buffer** menu item in the **PARALLEL MENU** is not set to **Disabled**. • Press **Go** to clear the message. The printer discards any data received on the parallel port. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
58 Too Many Trays Attached **58 Too Many Bins Attached** **58 Too Many Disks Installed**	The printer detects too many optional drawers with matching trays are installed under the printer. See “Paper Sources” on page 140 for information on how many sources your printer model may have. The printer detects too many output options are installed on the printer. See “Paper Exits (Output Bins)” on page 153 for information on how many output bins your printer model may have. The printer detects too many hard disks are installed. Your printer can have only one hard disk option installed. Turn the printer off and remove the extra option.
59 Incompatible <device>	The printer detects that an incompatible option is installed on an Optra S 1855. See note on page 253. **<device>**: One of the following paper handling options: envelope feeder, output bin x, duplex option, tray x.
61 Defective Disk	The printer detects a defective hard disk during power on, or during hard disk format or write operations. Press **Go** to clear the message. Hard disk operations are not allowed with a defective hard disk. If the disk is read / write protected, use MarkVision to restore write access. • Turn the printer off and remove the defective hard disk. Replace it with a new hard disk.
62 Disk Full	There is not enough free space in the hard disk to hold the data that was sent to the hard disk for storage. • Press **Go** to clear the message and continue processing. Any data currently being written to the hard disk is lost. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.

Attendance Message	Meaning and Required Action
63 Unformatted Disk	The printer detects an unformatted hard disk during power on. Note: Disk operations are not allowed until the hard disk is formatted. Try the following: • Format the hard disk using **Format Disk** in the **TESTS MENU**. • Send the data again. If the error condition remains, the hard disk is defective and must be replaced. Press **Go** to clear the message. The hard disk is ignored and normal operation continues.
70 - 79 messages	These numbered messages are reserved for internal network adapter messages. See the CD online document about the printer operator panel for more information. Also, see the documentation that comes with the internal network adapter.
80 Scheduled Maintenance	The printer requires replacement of routine maintenance items to maintain top performance, and avoid print quality and paper feed problems. The message displays when the printer maintenance counter determines 250,000 pages have printed. These components are in a maintenance kit available from Lexmark. Press **Go** to clear the message. It is recommended that you have a trained servicer install the maintenance kit components. Failure to replace the maintenance kit items will not interrupt printer operation, but can result in unsatisfactory performance of the printer. For more information, see “Maintaining Your Printer” on page 247.
81 Engine Code CRC Failure	Microcode in the engine flash code module has failed a CRC check. Press **Go** to clear the message. The microcode data is discarded and must be re-transmitted from the host computer.
88 Toner Low	The toner supply is low. Press **Go** to clear the message.
200 Paper Jam Remove Cartridge	The printer detects a paper jam under the print cartridge. Open the upper front door, remove the print cartridge, and remove the jammed print material. Reinstall the cartridge and close the door. See “200 and 201 Paper Jam - Remove Cartridge” on page 212 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**; however, the **Auto** setting does not guarantee the page will print.

Attendance Message	Meaning and Required Action
201 Paper Jam Remove Cartridge	The printer detects a paper jam under the printer cartridge and further back in the printer. Open the upper front door, remove the print cartridge, and remove the jammed print material. Reinstall the cartridge and close the door. See "200 and 201 Paper Jam - Remove Cartridge" on page 212 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**.
202 Paper Jam Open Rear Door	The printer detects a paper jam behind the printer rear door. Open the printer rear door and remove the jammed print material. Close the printer rear door. See "202 Paper Jam - Open Rear Door" on page 214 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**.
230 Paper Jam Check Duplex	The printer detects a paper jam in the duplex option. Remove the duplex front access cover. Remove the jammed print material if it is visible. If not, replace the duplex front access cover. Open the duplex rear door. Remove the jammed print material. Close the duplex rear door. Occasionally, print material may jam as it enters the duplex option. In this case, most of the print material is visible from the rear of the printer. Open the printer rear door and remove the jammed print material. Close the printer rear door. See "230 Paper Jam - Check Duplex" on page 218 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**.
24x Paper Jam Check Tray x	The printer detects a paper jam in the paper path of one of the paper trays. x represents the tray with the jam. Open Tray x and remove the jammed print material. If the tray is difficult to remove, remove the trays above and below this tray to access the jammed print material. See "24x Paper Jam - Check Tray x" on page 224 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**.
250 Paper Jam Check MP Feeder	The printer detects a paper jam in the multipurpose feeder. If the paper is visible from the front of the multipurpose feeder, pull it out. If only a small portion is visible, open the upper front door, remove the print cartridge, and remove the jammed print material. Reinstall the cartridge and close the door. See "250 Paper Jam - Check MP Feeder" on page 234 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**.

Attendance Message	Meaning and Required Action
260 Paper Jam Check Env Feeder	The printer detects a paper jam in the envelope feeder. If the envelope is visible from the front, move the envelope weight, remove the stack of envelopes, and pull the jammed envelope straight out. If only a small portion of the envelope is visible, pull the envelope feeder straight out of the printer and set it aside. Open the printer upper front door. Pull the envelope out. If the envelope is still difficult to remove, you may have to remove the print cartridge to release the envelope. Reinstall the print cartridge, if it was removed. Close the upper front door. Reinstall the envelope feeder. See “260 Paper Jam - Check Env Feeder” on page 234 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**.
27x Paper Jam Check Bin x	The printer detects a paper jam in an output option. x represents the output option with the jam. If the print material is visible from the front of an output option tray, pull it straight out. If only a portion of the print material is visible from the output expander, open the output expander rear door. Remove the jammed print material. Close the rear door. If the print material is not visible, it is jammed between two output expanders. Open the rear doors for both output expanders, and remove the print material. See “27x Paper Jam - Check Bin x” on page 238 for more information. Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto** (for **Auto**, if memory is available).
900—999 Service messages	These service messages indicate printer failures that may require service. Turn the printer Off (O), wait for about 10 seconds, and then turn the printer On (|). If the error recurs, write down the error number, the problem, and a detailed description. Call for service.

Attendance Message	Meaning and Required Action
Change <tray> **<Custom Type Name>** **<size>** **<type><size>**	The printer is requesting different print material than what has been loaded in the tray or set in the Paper Size or Paper Type menus. The display shows the following information: On line 1 of the display, the tray name (**<tray>**) where it expects to find the print material is shown. On line 2 of the display, one of the following is shown: **<Custom Type Name>**: A user-defined name, created using the MarkVision utility, for custom type 1 through 6. The name is truncated to 16 characters. **<size>**: If the requested type matches the type currently in the tray and the custom type name has not been defined by you, only the paper or envelope size displays. The name is truncated to 16 characters. **<type><size>**: The requested type **<type>** is a type other than a custom type. The type name is truncated to 9 characters. The requested size **<size>** of paper or envelope is displayed. The size name is truncated to 6 characters. • Load the requested size and type in the source. The printer automatically clears the message and continues processing the job. • To ignore the request, and print on the size and type installed in the tray, press **Select**. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.

Attendance Message	Meaning and Required Action
Reattach Envelope Feeder **Check Duplex Connection** **Reattach Output Bin x** **Check Tray x Connection** **Check Output Bin Connection**	The printer has lost communication with one of the following: • Optional envelope feeder • Duplex option • Optional output expander (x represents 1 through 3 depending on the number of optional output expanders installed) • Standard or optional trays (x represents trays 2 through 5 depending on how many trays are installed) Communication may be lost in the following ways: • The device was removed from the printer, for example, some options are removed to clear paper jams. • The device may still be attached to the printer, but may not be fully connected or may be experiencing a hardware failure. If one of these messages is displayed: • Reestablish communication if the device is removed or not fully connected by reinstalling the device. When the device is recognized by the printer, the message is cleared. • In case of a hardware failure, turn the printer off and back on. If the error recurs, turn the printer off, remove the device, and call for service.
Close Door or Insert Cartridge	The upper front door is open or the print cartridge is not installed. Close the door or install the print cartridge, then close the door.
Close Duplex Rear Door	The duplex rear door is open. Close the duplex rear door. The printer clears the message and continues.

Attendance Message	Meaning and Required Action
Load <tray> **<Custom Type Name>** **<size>** **<type><size>**	The printer is requesting paper, envelopes, or other print material from a source it detects is empty. The display shows the following information: On line 1 of the display, the tray name (**<tray>**) where it expects to find the print material is shown. On line 2 of the display, one of the following is shown: **<Custom Type Name>**: A user-defined name, created using the MarkVision utility, for custom type 1 through 6. The name is truncated to 16 characters. **<size>**: If the requested type matches the type currently in the tray and the custom type name has not been defined by you, only the paper or envelope size displays. The name is truncated to 16 characters. **<type><size>**: The requested type **<type>** is a type other than a custom type. The type name is truncated to 9 characters. The requested size **<size>** of paper or envelope is displayed. The size name is truncated to 6 characters. • Load the requested size and type in the source. The printer automatically clears the message and continues processing the job. • To ignore the request and print on the size installed in the tray, press **Select**. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.

Attendance Message	Meaning and Required Action
Load Manual **<Custom Type Name>** **<size>** **<type><size>**	The printer is requesting paper, envelopes, or other print material to be manually fed from the multipurpose feeder. One of the following items displays on line 2: **<Custom Type Name>**: A user-defined name, created using the MarkVision utility, for custom type 1 through 6. The name is truncated to 16 characters. **<size>**: If the requested type matches the type currently in the tray and the custom type name has not been defined by you, only the paper or envelope size displays. The name is truncated to 16 characters. **<type><size>**: The requested type **<type>** is a type other than a custom type. The type name is truncated to 9 characters. The requested size **<size>** of paper or envelope is displayed. The size name is truncated to 6 characters. • Load the requested size and type in the source. The printer automatically clears the message and continues processing the job. • If the correct size and type is already loaded in the multipurpose feeder, press **Go**. • To ignore the request and print on the size installed in the tray, press **Select**. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
Insert Duplex Front Cover	The duplex front access cover is open. Close the duplex front access cover. The printer clears the message and continues.

Attendance Message	Meaning and Required Action
Insert <tray>	The printer is requesting that a tray be inserted so it can continue printing. The message displays when the printer needs to select print material from a missing tray or one of the trays installed below the missing tray. This may happen if you remove trays to fill with print material when a job is printing. <tray> represents the missing tray, Tray 1 to Tray 5. To avoid this message, press **Stop** and wait for the job to stop printing, then remove the trays to fill them. When the message occurs: • Insert the requested tray. The message clears from the display and job continues processing. • To cancel the current job, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Cancel Job** is on the second line. Press **Select**. • To reset the printer, press **Menu>** or **<Menu**. The **Job Menu** is displayed. Press **Menu>** or **<Menu** until **Reset Printer** is on the second line. Press **Select**.
Print Jobs on Disk ?	This message displays when the printer Print Job Buffering function is enabled and the printer is turned Off while print jobs are spooled to the hard disk, and the printer is turned back on. The printer asks for confirmation to print the waiting jobs that were previously spooled to the hard disk. This message gives you the chance to print the jobs or delete all spooled jobs. • Press **Go** to accept the request and print the jobs. • Press **Return** or **Stop** to cancel the request and delete all spooled jobs.
Remove Paper Standard Bin	The printer determines that the standard output bin is full. Remove the print material from the standard bin and press **Go**.
Remove Paper Output Bin x	The printer determines that one of the output option bins is full. x represents the output option bin number. Remove the print material from the defined output option and press **Go**.

Attendance Message	Meaning and Required Action
Remove Paper All Output Bins	The printer determines that all output bins (standard bin or output options) are full since all the bins are linked together as one bin. See “Output Bin Linking” on page 291 for more information about linking bins. Remove the print material from all the output bins and press **Go**.
Remove Paper <linked set bin name>	The printer determines that all of the output bins in the named linked set are full. **<linked set bin name>** represents the linked set bin name. The linked set bin name is truncated to 16 characters. Remove the print material from all the bins in the linked set and press **Go**.

Solving Printer Problems

Chapter 8

Sometimes printer problems are very simple to solve. When you have a problem, first make sure that:

1. **The power cord is plugged into the printer and a properly grounded electrical outlet.**
2. **The printer power switch is On (|).**
3. **The electrical outlet is not turned off by any switch or breaker.**
4. **Other electrical equipment plugged into the outlet is working.**
5. **All options are installed properly.**
6. **Turn the printer power Off (O), wait for about 10 seconds, and then turn the printer On (|).** This often fixes the problem.

The tables in this chapter define some printing problems and what you can do to resolve them. If the suggested corrective action doesn't fix the problem, call your service representative.

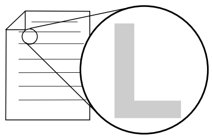
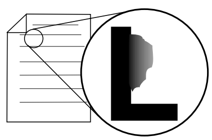
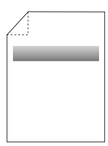
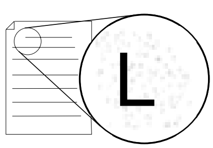
Display Problems

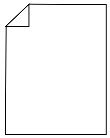
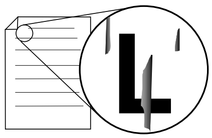
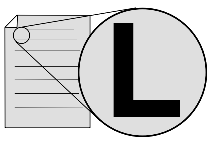
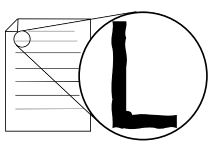
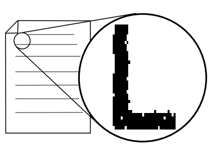
Problem	Action
Menus Disabled status message appears on the display.	The operator panel menus have been disabled. To enable the menus if they are not password protected: Turn the printer off. Press and hold **Go** and **Stop**, and then turn the printer On (|). Release the buttons when **Performing Self Test** is displayed. If the operator panel menus have been password protected, see your system administrator.
Display shows only diamonds or is blank.	Turn the printer power Off (O). Wait about 10 seconds. Turn the printer power On (|). The printer should issue the **Performing Self Test** message. When the test is completed, the **Ready** message displays. If the messages do not display, turn the printer power Off (O) and call Lexmark Technical Support.
Menu settings changed from the operator panel have no effect.	The settings are being overridden by settings in the software application, the printer driver, or the printer utilities.

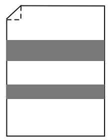
Printing Problems

Problem	Action
Job prints from a different tray or on the wrong paper.	Check **PAPER TYPE** in the **PAPER MENU** on the printer operator panel and in the printer driver. See PAPER TYPE on page 65.
Printer does not duplex pages.	• Verify that **Duplex** is selected on the printer operator panel and in the printer driver. • Make sure adequate memory is available.
Paper does not stack neatly in any output bin.	Turn the paper stack over in the tray or multipurpose feeder.

Print Quality Problems

Problem	Action
Printing is too light. 	• Check the toner supply. • Make sure **Toner Saver** is set to **Off**. • Change the **Print Darkness** setting in the **QUALITY MENU** from **Normal** to **Darker**. • If you are printing on an uneven print surface, change the **PAPER TEXTURE** setting for the paper type you are using in the **PAPER MENU** to **Rough**. • Verify that the correct print material is being used.
Toner smears or print comes off the page. 	• In the **PAPER MENU** for the paper type you are using, set **PAPER TEXTURE** to **Rough** and set **PAPER WEIGHT** to **Heavy**. • Verify that the print material is within the printer specifications. • If the problem continues, call Lexmark Technical Support.
Toner appears on the back of the printed page. 	Toner is on the transfer roll. To help prevent this, do not load paper that is smaller than the page size of the job to be printed. Open and close the printer upper front door to run the printer through its setup cycle and clean the transfer roll. Replace the fuser cleaner. The fuser cleaner and instructions are included in the box when you purchase a new print cartridge.
Toner fog or background shading appears on the page. 	• Check the print cartridge to see if it is installed correctly or change the print cartridge. • If the problem continues, change the charge roll. See “Ordering a Charge Roll Kit” on page 250 for more information.

Problem	Action
Entire page is white. 	Make sure the packaging material is removed from the print cartridge. See “Removing the Print Cartridge Packaging” on page 12. Check the print cartridge to be sure it is installed correctly. See page 15 for directions.
Streaks appear on the page. 	Check to see if the toner is low. Remove the cartridge. To utilize the remaining toner, shake the cartridge gently. Reinstall the same print cartridge. See page 15 for directions. If you are using pre-printed forms, make sure the ink can withstand temperatures of 212°C (414°F).
Printing is too dark. 	Change the **Print Darkness** setting in the **QUALITY MENU** to **Normal** or **Lighter**. Macintosh users should make sure the lines per inch (lpi) setting is not set too high in the software application.
Characters have jagged or uneven edges. 	• Change the **Print Resolution** setting in the **QUALITY MENU** to **600 dpi** or **1200 dpi**. • Turn **PQET** in the **QUALITY MENU** to **On**. • If you are using downloaded fonts, verify that the proper installation to the host computer and the fonts are supported by the software application.
Image quality is poor. 	Resolution was automatically reduced. Reduce the complexity of the job or add additional memory. See “Res Reduced” on page 181.

Problem	Action
Part or all of the page is printed in black. 	• Check the print cartridge to see if it is installed correctly. See page 15 for directions. • If the charge roll has been replaced, verify that it has been installed correctly.
The job prints, but the left and top margins are incorrect.	• Make sure **PAPER SIZE** menu setting is set correctly in the **PAPER MENU**. • Make sure the margins are set correctly using the paper size settings in the software application you are using. • Check the Print Area menu setting in the **SETUP MENU**. Set the value to **Normal**.

Option Problems

Problem	Action
Option does not operate correctly after it is installed.	If your printer is an Optra S 1855, make sure the option is marked with a colored circle, indicating that it is compatible with an Optra S 1855.
	Optional Drawers: Make sure the connection between drawers (250-sheet drawer, 500-sheet drawer, dual 500-sheet drawer, which is standard for the Optra S 2455) or the connection between a drawer and the printer is secure. See "Installing an Optional Drawer" on page 256. Make sure the print material is loaded correctly. See "Loading a Paper Tray" on page 146.
	Optional Envelope Feeder: Make sure the connection between the envelope feeder and the printer is secure. See "Installing the Envelope Feeder" on page 262. The print material size must be set in both the software application and the printer operator panel. Make sure the envelopes are loaded correctly. See "Loading the Envelope Feeder" on page 265.
	Duplex Option: Make sure the connection between the duplex option and the printer is secure. If the duplex option is listed in the Installed Options list on the menus setting, but paper jams each time it enters or exits the duplex option, the printer and duplex option may not be properly aligned. See "Installing the Duplex Option" on page 273. Make sure the duplex front access cover is securely installed.
	Optional Output Expander: Make sure the connection between the optional output expander and the printer is made securely. Make sure the connections between optional output expanders are made securely if you have installed more than one. If the output expanders are listed in the Installed Options list on a menus settings page, but paper jams each time it exits the printer and enters an output expander, the output expander may not be properly inserted. Reinstall each output expander. See "Installing an Optional Output Expander" on page 282.

Problem	Action
Option does not operate correctly after it is installed.	**Flash Memory Option:** The connection is made by plugging the card into the connector on the printer system board. See “Installing a Flash Memory Option” on page 304. Check that it is securely connected in the appropriate position.
	Printer Memory Option: The connection is made by plugging the card into one of the two connectors on the printer system board. See “Installing a Printer Memory Option” on page 300. Check that it is securely connected in the appropriate position.
	Hard Disk with Adapter Option: The connection is made by plugging the card into a connector on the printer system board. See “Hard Disk with Adapter Option Card” on page 312. Check that it is securely connected.
	INA Option: The connection is made by plugging the card into a connector on the printer system board. See “Internal Network Adapter (INA) Option Card” on page 309. Check that it is securely connected. The connection to the network is made through the network cable. See the documentation that came with your network option. Check that you have the correct cable, that it is securely connected, and that the network software is correctly set up. Turn the printer power On (|) and verify the installation. If the printer does not recognize that the option is installed, call for service. Check the menu setting or the software application to make sure the option is selected or enabled.

Problem	Action
Option does not operate correctly after it is installed.	**Tri-Port Option:** The connection is made by plugging the card into a connector on the printer system board. See “Tri-Port Interface Option Card” on page 310. Check that it is securely connected. For Macintosh users: • Make sure the host computer is set to LocalTalk. • If you are using a phone wire connection, a terminator plug must be used.
	Parallel 1284-C Adapter Option: The connection is made by plugging the card into a connector on the printer system board. See “Parallel 1284-C Adapter Option Card” on page 311. Check that you have the correct cable and that it is securely connected. Turn the printer power On (|) and verify the installation. If the printer does not recognize that the option is installed, call for service.
	Infrared Adapter: If infrared communication stops or does not occur, check the following: • Communication distance: The distance between the two infrared ports should be 1 meter (39 in.) or less. If communication does not occur between ports, move the ports closer together. • Make sure both ports are stable. Make sure the computer is on a level surface. • Make sure the angle of communication which is the angle between the two infrared ports and the level surface below the devices is within 15 degrees of either side of an imaginary line drawn between the two infrared ports. • Make sure there is no bright light, such as, direct sunshine or bright lights interfering with communication. • Make sure no objects are placed between the two infrared ports.

Solving Printer Problems

Network Printing Problems

Problem	Action
Job did not print or incorrect characters printed.	If you are using a Lexmark INA or external network adapter (ENA), verify that it is set up properly and the network cable is connected. Note: Refer to the network documentation that came with your adapter for setup instructions and information on using the network adapters. For Novell users: • Make sure the netware.drv file is dated October 24, 1994 or later. • Make sure the NT (no tabs) flag is included in the capture statement. For Macintosh users: • The printer may need an optional network card to allow Macintosh connection. • Verify that the printer is set up correctly in CHOOSER. For Windows users: • Turn Direct to Port Off in the PostScript driver. • Verify that Enable Tabs is not selected under the port settings.

Other Problems and Questions

Problem	Action
How do I get updated printer drivers or utilities?	See "Printer Drivers" on page 34 and "Getting Updated Drivers and Utilities" on page 47.
Where are the printer escape codes listed?	The CD contains an Adobe Acrobat file with a complete list of Printer Command Language (PCL) escape codes.
How do I attach a serial cable to the printer?	Optra S 2455, Optra S 1625, and Optra S 1255 require an optional adapter to allow serial attachment. The Tri-Port Interface option card supports serial RS-232C / RS-422A. See "Tri-Port Interface Option Card" on page 310 for more information.
WordPerfect for DOS cannot access additional trays.	Select a sheet feeder option by selecting Shift+F7, Printer, Edit, and choose the appropriate model of printer. Notice the bin assignment on the screen. Next, edit the form using Shift+F7, Page, Paper Size, Edit, and set the location to the bin number you want.

Clearing Jams

Chapter 9

By carefully selecting print materials and loading them properly, you should be able to avoid most paper jams. If paper jams do occur, follow the steps outlined in this chapter. If paper jams occur frequently, make sure you see “Tips for Avoiding Paper Jams” on page 155.

To resolve the paper jam attendance messages, you must clear all paper from the paper path.

Press **Go** to resume printing. The printer prints a new copy of the page that jammed if **Jam Recovery** is set to **On** or **Auto**; however, the **Auto** setting does not guarantee the page will print.

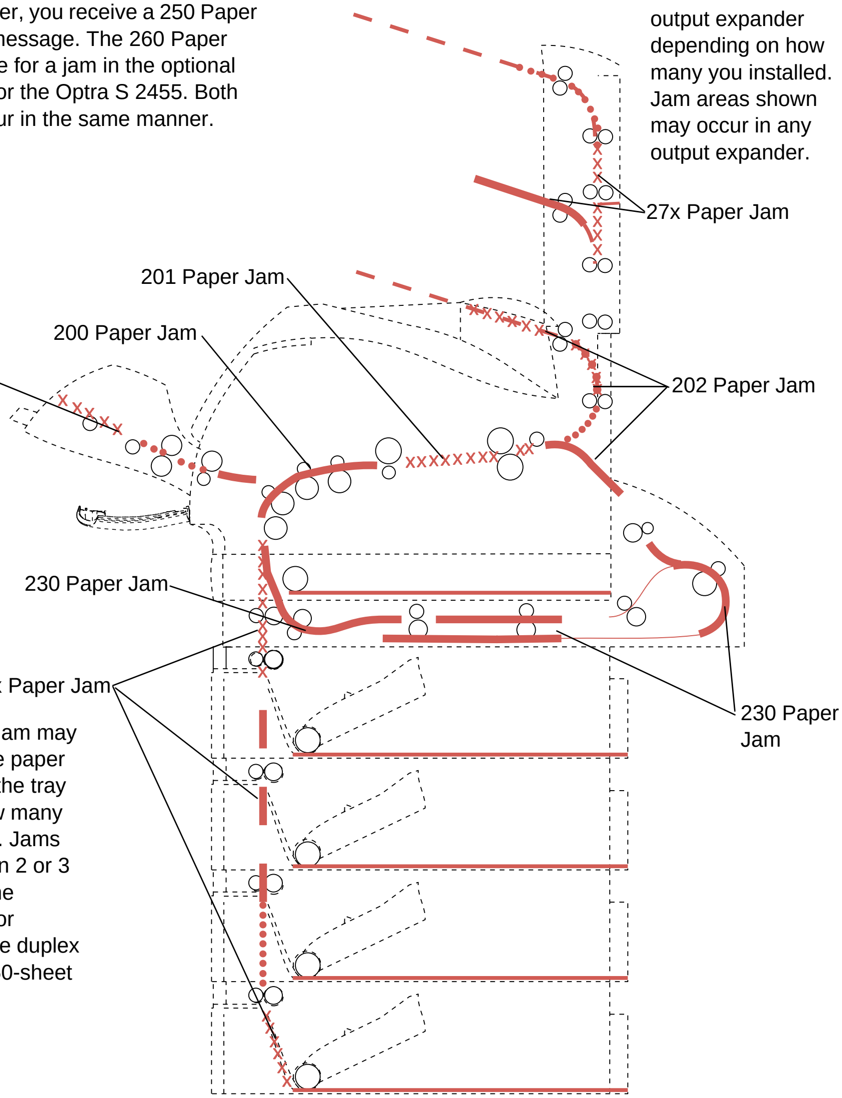
Possible Paper Jam Areas

The “Paper Jam Areas” illustration on page 210 shows the path the paper travels through the printer and the options. The path varies depending on the paper source and paper exit selection (output bin). The jam areas are shown, too.

Paper Jam Areas

Note: For printer models with the Multipurpose Feeder, if a jam occurs in the multipurpose feeder, you receive a 250 Paper Jam attendance message. The 260 Paper Jam is shown here for a jam in the optional envelope feeder for the Optra S 2455. Both types of jams occur in the same manner.

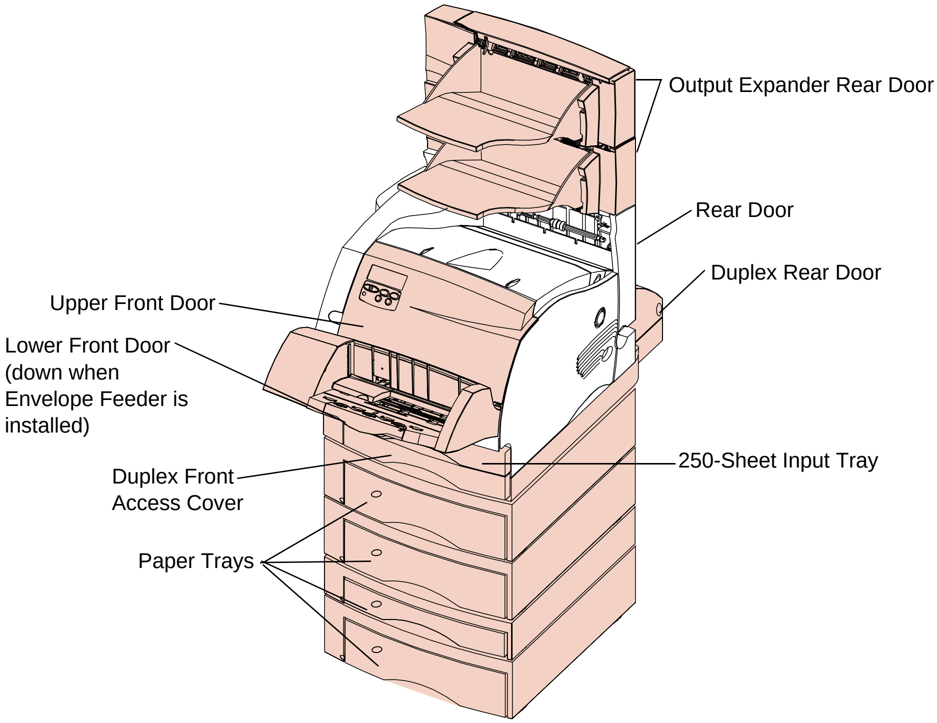
Note: 27x Paper Jam may occur in any of the optional output expanders. x indicates the output expander depending on how many you installed. Jam areas shown may occur in any output expander.



Note: 24x Paper Jam may occur in any of the paper trays. x indicates the tray depending on how many trays are installed. Jams can occur between 2 or 3 trays, on the incline surface of a tray, or between a tray, the duplex option, and the 250-sheet input tray.

Accessing Paper Jam Areas

You open doors and covers, remove paper trays, and remove options to access paper jam areas. If your printer has a multipurpose feeder, it is visible when the lower front door is opened. The following illustration shows the Optra S 2455.



200 and 201 Paper Jam - Remove Cartridge

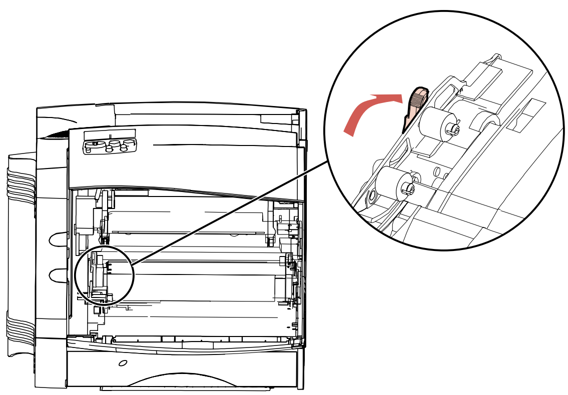
The paper is jammed in the area under the print cartridge, so this requires removing the print cartridge from the printer. With a 201 attendance message, the jam is farther back in the printer, so you need to reach in farther to grasp the paper. In this case, the page could have jammed when it entered the duplex option from the printer.

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path.

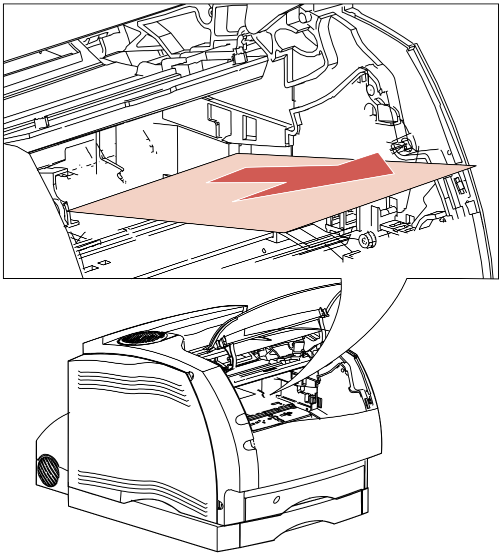
1. **Open the upper front door.**
2. **While grasping the print cartridge by the hand grip, pull the print cartridge up toward the upper front door, and then pull it straight out toward you. Lay it aside.**

CAUTION: The rear portion of the inside of the printer is hot.

3. **Locate and gently push the feed roller release lever back to release the pressure on the paper.**



4 **Pull the paper up and toward you.**



5 **Reinstall the print cartridge.** (See page 15 for instructions on reinstalling the print cartridge.)

6 **Close the upper front door.**

Note: If there is resistance to the paper, and it does not move immediately when you pull, stop pulling. You need to access the paper from the rear door. See “202 Paper Jam - Open Rear Door” for more information.

Clearing Jams

202 Paper Jam - Open Rear Door

Jams in the following areas result in a 202 attendance message. Jams in these areas require opening the printer rear door:

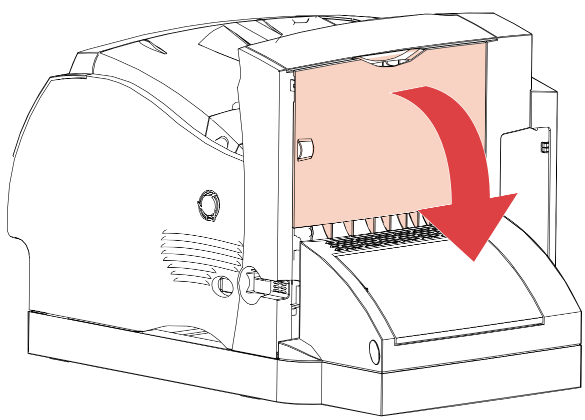
- the paper jams before reaching the standard output bin
- the paper jams in the rear of the printer when a page enters the duplex option to print on the second side
- the paper jams after it starts into the standard output bin, but before it has exited completely into the bin

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path.

Before Reaching the Standard Output Bin or Entering to the Duplex Option

The paper jammed before it exited into the standard output bin or when it entered the duplex option to print on the second side of a page.

1 **Locate the rear door handle and pull it toward you.**

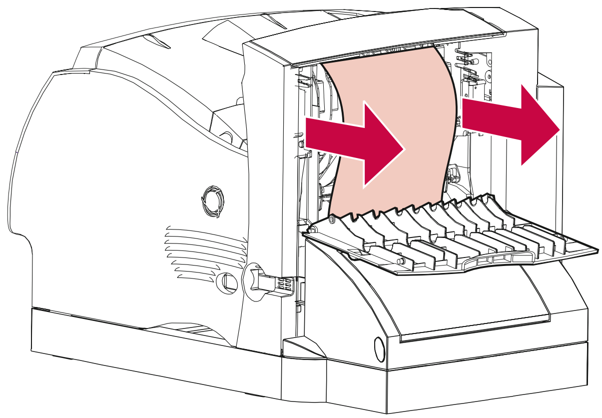


The rear door opens and drops back toward you.

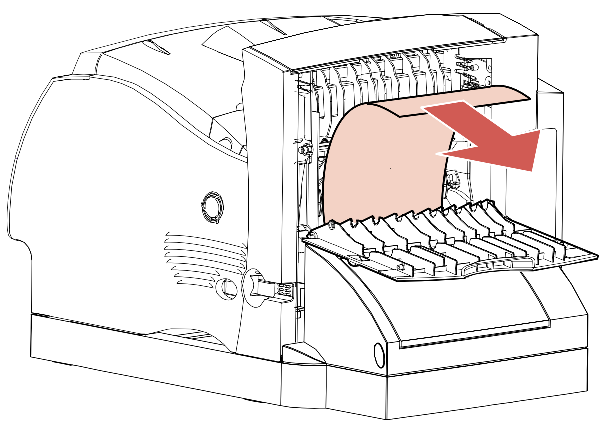
2 Determine how to remove the paper based on what part of the paper is visible.

- If the middle of the sheet of paper is visible, but not the ends of the paper, grasp the paper on both sides and gently pull the paper straight out toward you.

Note: If paper is still in the fuser area, open the upper front door to release the fuser rollers and free the paper for removal.



- If an end of the paper is visible, pull the paper straight out toward you.

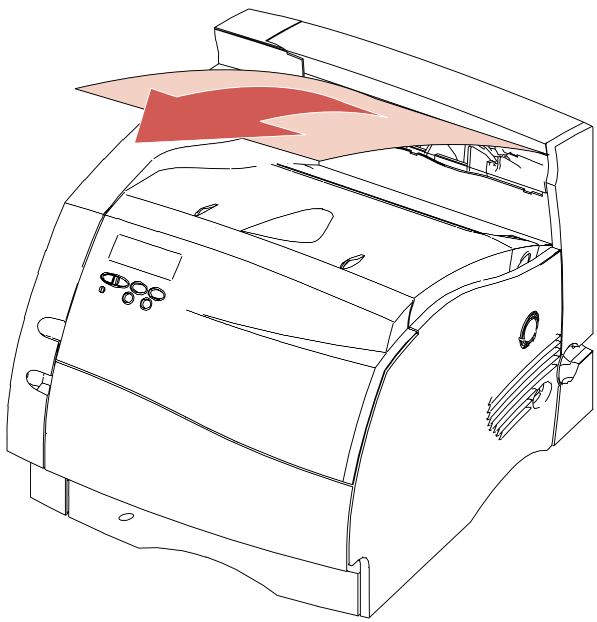


- If there is resistance to the paper and it does not move immediately when you pull, stop pulling. Remove the print cartridge, then return to the back of the printer at the rear door area. Pull the paper out.

3 **Close the rear door.**

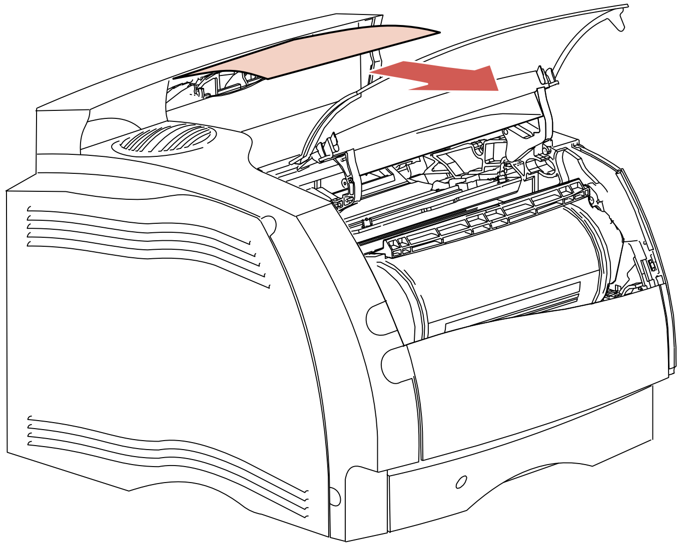
Exiting to the Standard Output Bin

1 **Pull the paper straight out.** If there is resistance to the paper, and it does not give immediately when you pull, stop pulling. Continue with the next step.



2 **Open the upper front door to release the fuser rollers.**

3 Pull the paper straight out.



Note: Usually with a jam located in this area, there is another jam behind the rear door of the printer. See “Before Reaching the Standard Output Bin or Entering to the Duplex Option” on page 214 for instructions on how to remove this type of jam.

230 Paper Jam - Check Duplex

Jams in the following three areas result in a 230 attendance message:

- paper path area in front of the duplex option
- inside the duplex option
- back of the duplex option (the page may be entering the duplex option, inside the duplex option, or exiting the duplex option to go back to the printer to exit after printing)

Note: To avoid tearing paper when removing the duplex front access cover, pull it out gently and slowly.

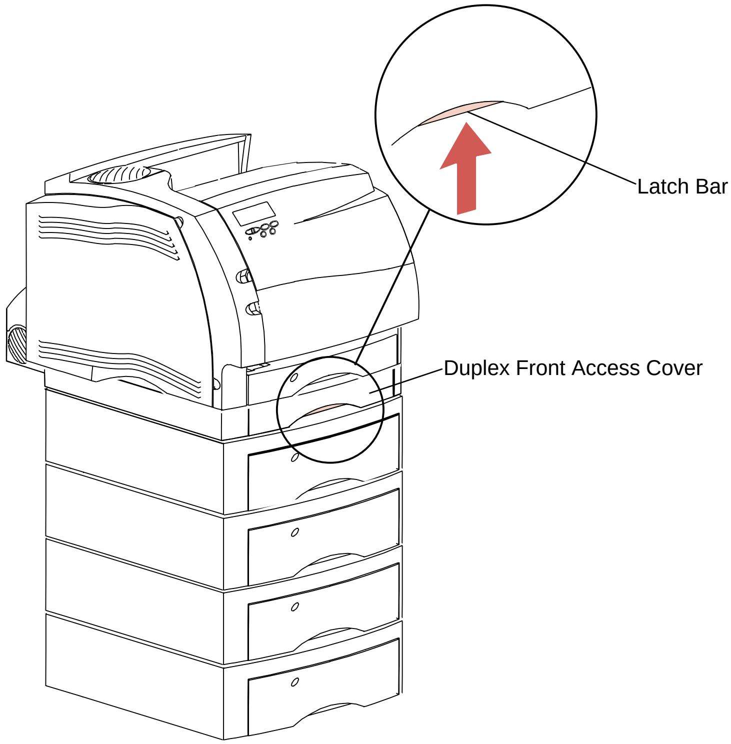
You must check all of the areas to make sure you clear the 230 attendance message.

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path.

Paper Path Area in Front of Duplex Option

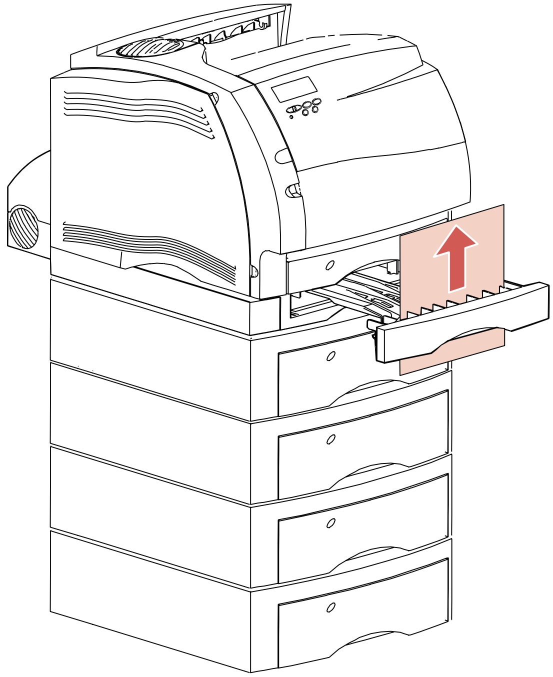
This type of jam may occur under another error number instead of 230 Paper Jam, but you must pull the duplex front access cover open. The leading edge of the paper is jammed in the pass-through area where paper crosses in the front of the duplex option.

1 **Locate the latch bar under the hand cutout on the duplex front access cover and push the latch bar up.**



2 **Pull the duplex front access cover straight out from the duplex option.** The edge of the paper is visible.

3 Pull the paper straight up and out.



Since you already have the duplex front access cover pulled out, continue with the following section.

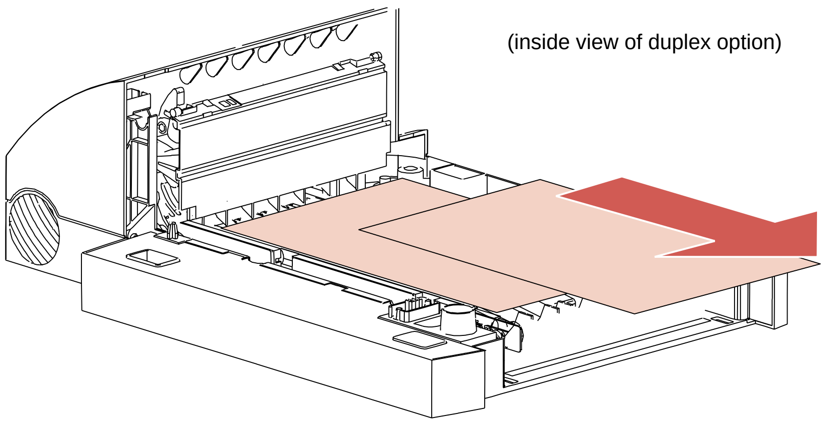
Clearing Jams

Inside the Duplex Option

Up to two sheets of paper are lying behind the duplex front access cover inside the duplex option.

1 **Remove the 250-sheet input tray to give you more clearance.**

2 **Locate sheets of paper lying in the duplex front access cover and pull the paper out toward you.**

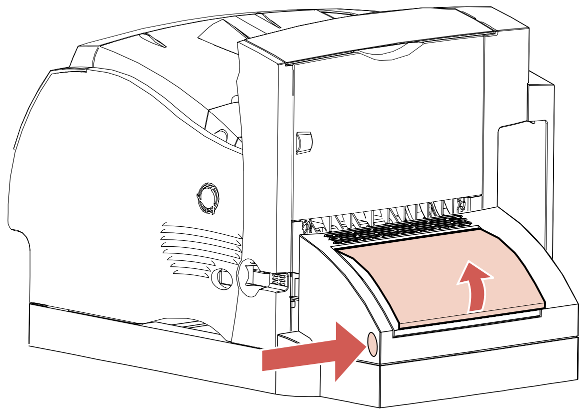


3 **Slide the duplex front access cover back into the duplex option.** Make sure it snaps into place.

4 **Slide the 250-sheet input tray back into the printer.**

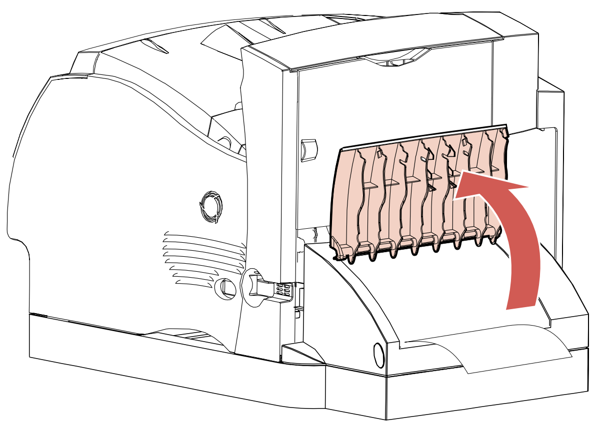
Back of the Duplex Option

1 **Push the button as shown.**



The duplex rear door opens.

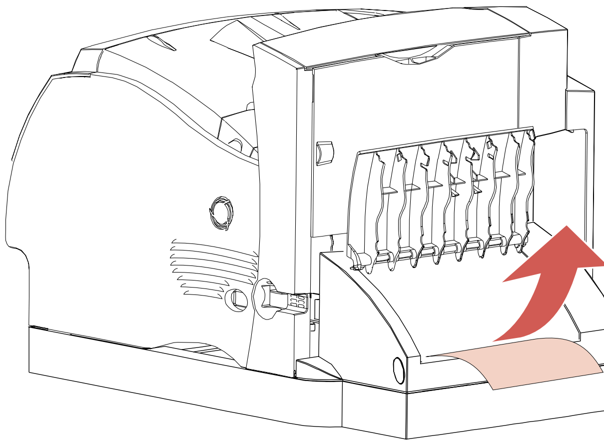
2 **Raise the duplex rear door.** It remains in place.



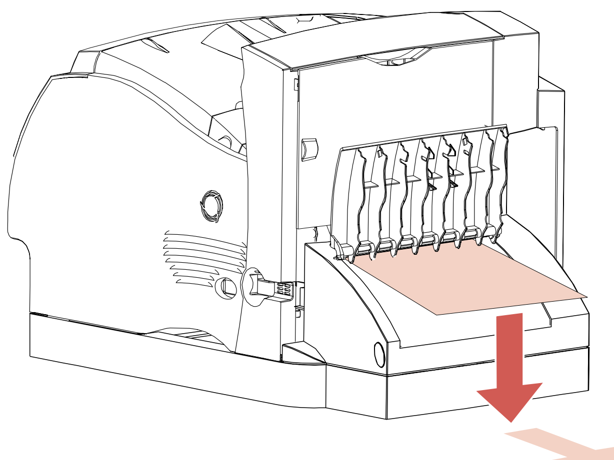
3 **Look under the rear door for the edge of the paper. Determine how it is jammed:**

- If a short piece is visible down inside the duplex option next to the inner wall, try to grasp it and pull it out. If you cannot grasp it, see “Inside the Duplex Option” on page 221 for instructions.

- If only a short piece of the paper is visible up toward the rear of the printer, do not pull the paper out. The paper may be easier to access from inside the printer. See page 212 for instructions to remove the paper. However, if most of the paper is visible, continue with the following.
  - Pull the paper up and out toward you if the paper is in this position.

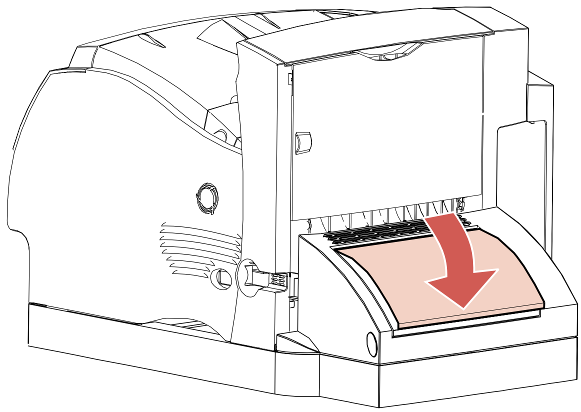


  - Pull down and out if the paper is in this position.



Clearing Jams

4 **Close the duplex rear door by pressing the center of the door.** Make sure it snaps into place.



24x Paper Jam - Check Tray x

Jams in the following four areas result in a 24x attendance message. x represents the tray number where the jam has occurred. Paper jams in trays may be:

- on the incline surface of a tray
- between two trays
- between three trays (this happens if you are using legal-size paper in the trays or if you have an optional 250-sheet drawer installed with other optional drawers or with the standard dual 500-sheet drawer for the Optra S 2455)
- between a tray, the duplex option, and the 250-sheet input tray

To avoid tearing print materials when opening trays, pull the trays out gently and slowly.

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path.

Clearing Jams

Incline Surface of a Tray or Between Two Trays

If your paper is being fed from any of the standard or optional trays, the paper may jam:

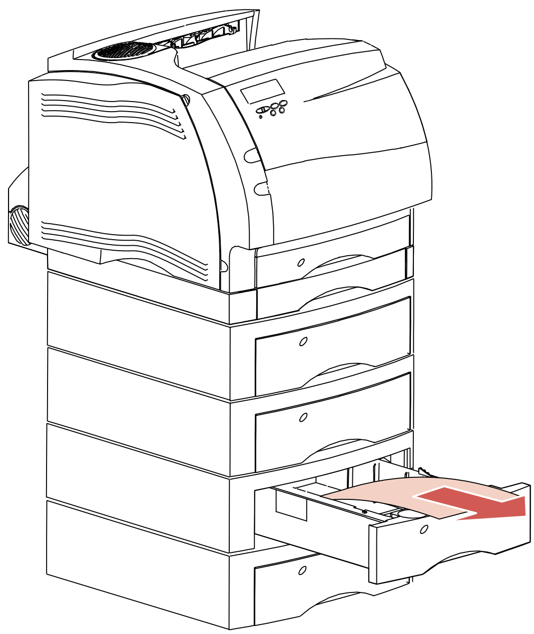
- along the incline surface of the tray where the paper feeds out of the tray
- between feed rollers in the pass-through area where paper crosses in the front of two trays

You see the difference as soon as you pull the tray out.

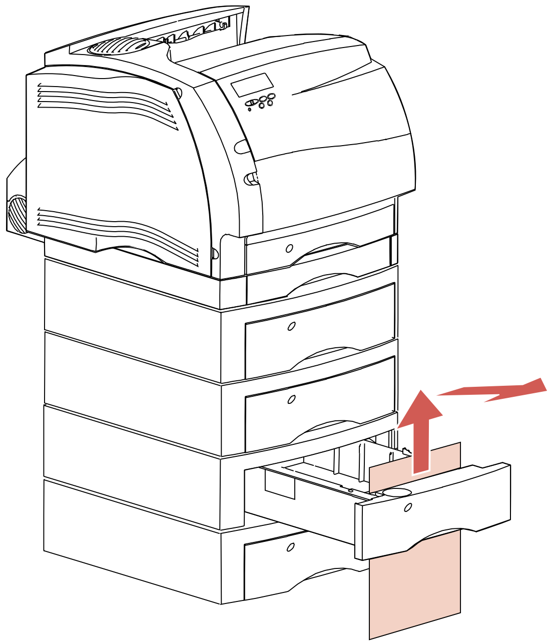
1 **Pull the paper tray half way out of the support unit.**

2 **Look for paper in the paper tray and remove it based on how it is jammed:**

   - If the paper is lying on the incline or wall surface at the front of the tray, pull the paper straight out.



- If the paper is between two trays, when you pull the tray out of the support unit, the top edge of the paper springs out toward you. Pull the paper straight up, and then out.



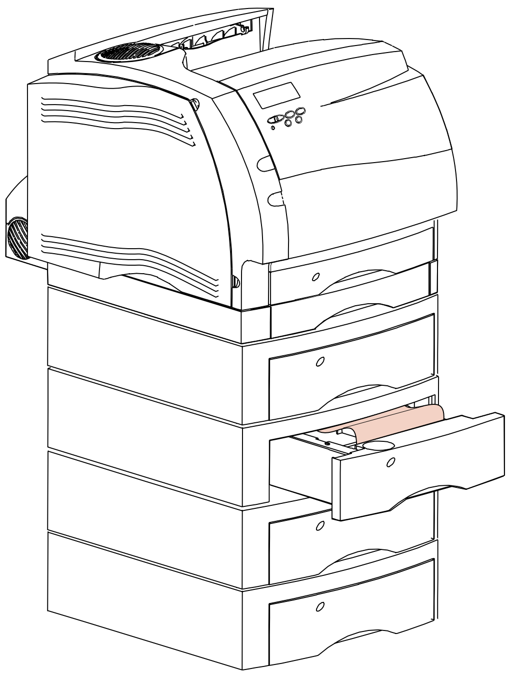
3 Slide the paper tray back into the support unit.

Note: If you do not see one end of the print material, the jam has occurred between three trays. See “Between Three Trays” on page 227 to remove the jam.

Between Three Trays

This type of jam may occur if you are using legal-size paper in the trays or if you have an optional 250-sheet drawer installed with other optional drawers or with the standard dual 500-sheet drawer.

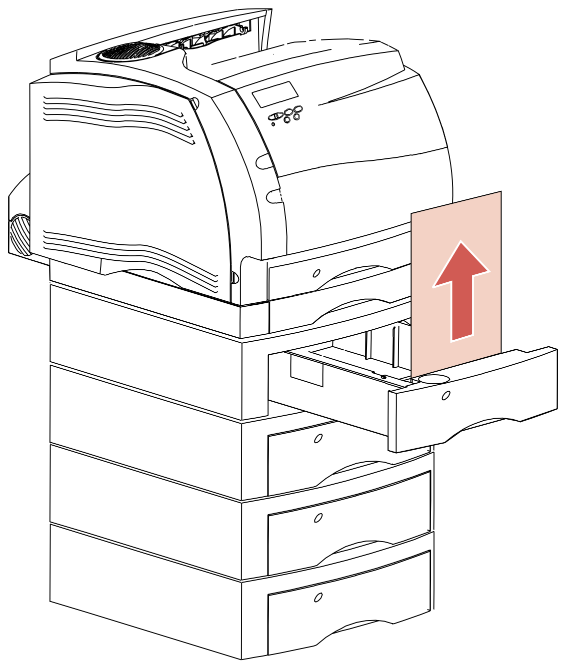
1 **Pull the paper tray out of the support unit.** If only a short piece of the paper is visible, do not pull down to remove the paper.



2 **Gently slide the paper tray back into the support unit.**

3 **Pull the paper tray out of the support unit that is above the tray you just pulled out and closed.**

4 **Look for the leading edge of the paper.** Most of the paper should be visible now.



5 **Pull the paper in either direction, up or down.** If it does not pull easily one way, try the other way.

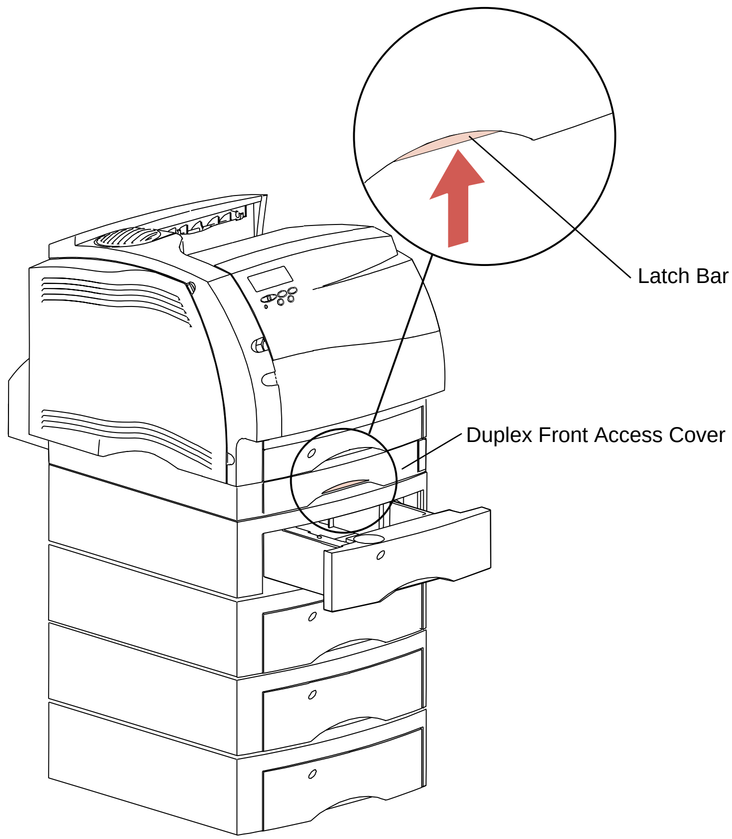
6 **Slide the paper tray back into the support unit.**

Note: With this type of jam, there may be another jam under the print cartridge. Remove the print cartridge and look for a paper jam. Remove any jammed paper and reinstall the print cartridge.

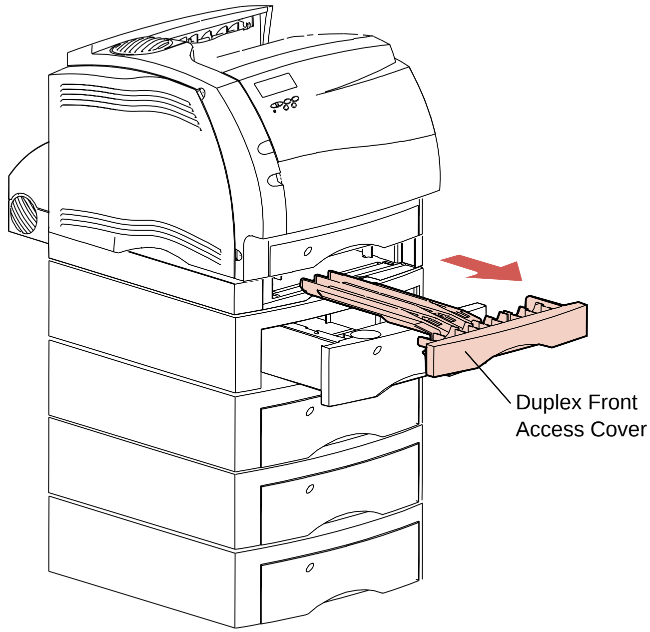
Between Tray, Duplex Option, and 250-Sheet Input Tray

Note: To avoid tearing paper when opening the duplex front access cover, pull the duplex front access cover out gently and slowly.

1. **Pull the paper tray out of the support unit.** If only a short piece of the paper is visible, do not pull down to remove the paper.
2. **Locate the latch bar under the hand cutout on the duplex front access cover.**



3 **Push the latch bar up and pull the duplex front access cover straight out from the duplex option.**

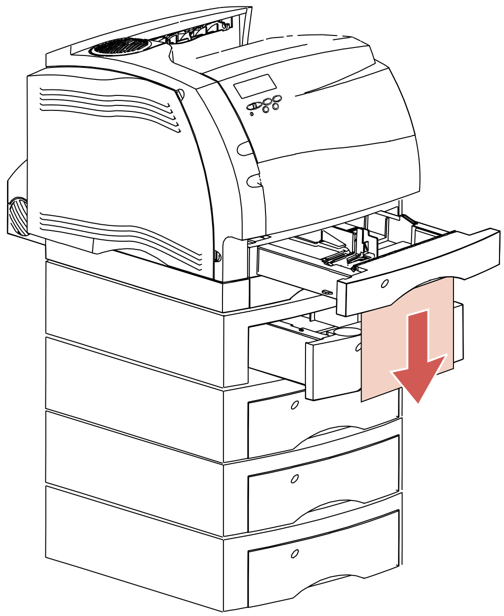


Clearing Jams

4 Pull the 250-sheet input tray out of the printer.

- If you see the edge of the paper in the 250-sheet input tray:

  a Pull the paper down and out.



Clearing Jams

b Slide the paper tray all the way into the printer. In this case the paper is not trapped in the printer feed rollers.

c Slide the duplex front access cover back into the duplex option. Make sure it snaps into place.

- If you do *not* see the edge of the paper in the 250-sheet input tray:

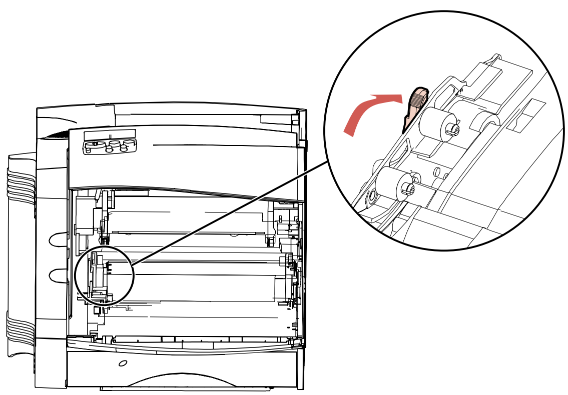
a Push the 250-sheet input tray back into the printer.

b Push the upper release latch on the front left side of the printer to the right to release the upper front door.

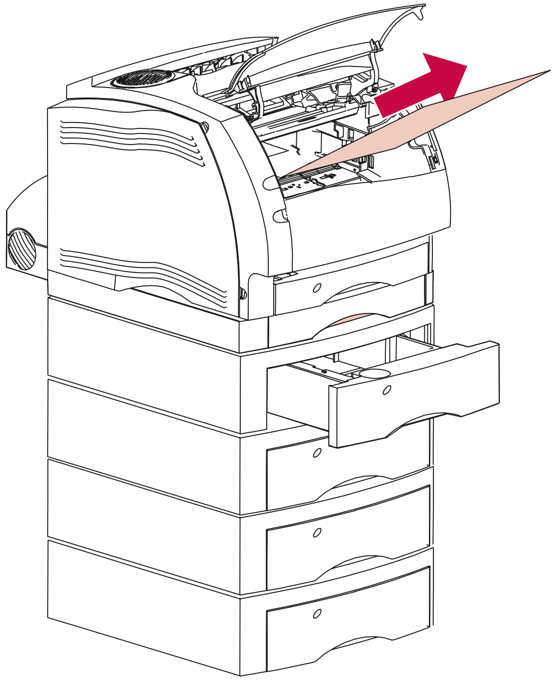
c Raise the upper front door.

d Remove the print cartridge. You should see the leading edge of the paper now.

e Locate and gently push the feed roller release lever back to release the pressure on the paper.



f Pull the paper up and toward you.



g Reinstall the print cartridge. (See page 15 for instructions on reinstalling the print cartridge.)

5 **Close the upper front door.**

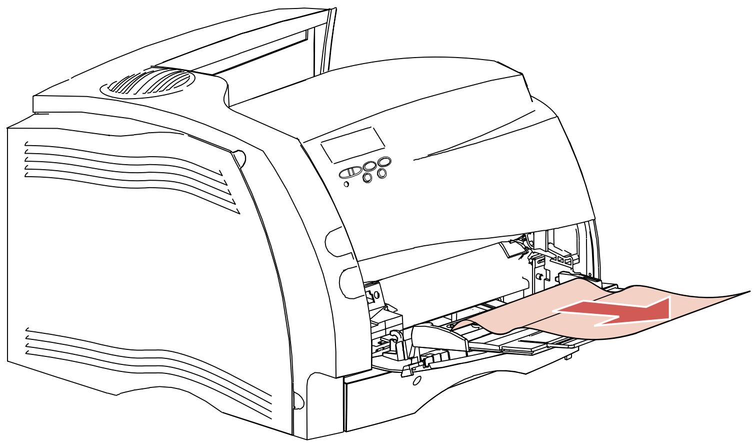
Clearing Jams

250 Paper Jam - Check MP Feeder

To avoid tearing print materials, pull the jammed print material out gently and slowly.

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path.

Pull the jammed print material straight out of the multipurpose feeder toward you.



260 Paper Jam - Check Env Feeder

Envelope jams may occur in two ways to result in a 260 attendance message:

- at entry into the optional envelope feeder
- between the envelope feeder and the printer

To avoid tearing envelopes, pull envelopes out gently and slowly.

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path.

At Entry into the Envelope Feeder

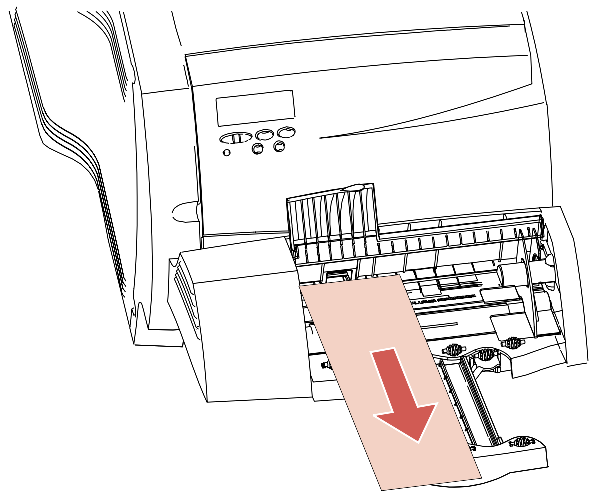
Since the envelope feeder feeds envelopes from the bottom of the stack, the envelope on the bottom is jammed.

1 **Slide the attached envelope weight up.**

2 **Flip the envelope weight over and back toward the printer.**

3 **Remove the stack of envelopes from the envelope feeder.**

4 **Pull the jammed envelope straight out toward you.**



5 **Replace the stack of envelopes in the envelope feeder.**

6 **Adjust the envelope edge guide if needed.**

7 **Rotate the envelope weight and lower it to the stack.**

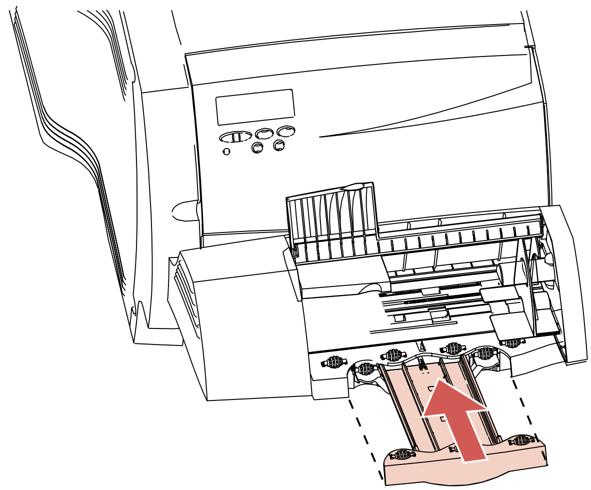
Between the Envelope Feeder and the Printer

1 **Slide the attached envelope weight up.**

2 **Flip the envelope weight over and back toward the printer.**

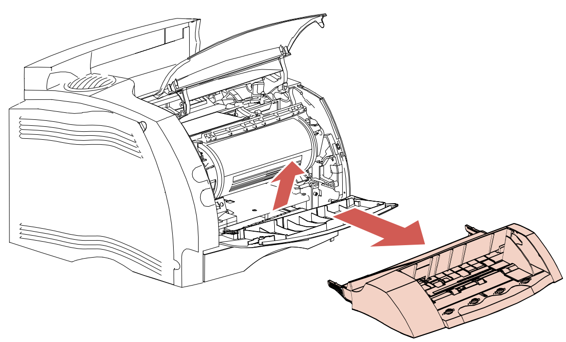
3 **Remove the stack of envelopes from the envelope feeder.**

4 **Push the envelope support to the closed position.**

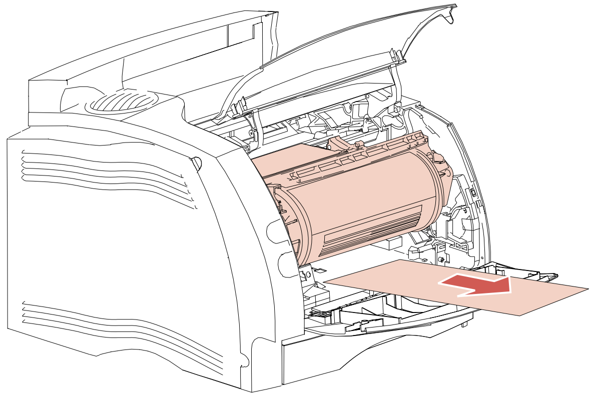


5 **Open the upper front door.**

6 **Pull the envelope feeder up slightly and straight out of the printer.** Set it aside.



7 **Pull the envelope straight out toward you.**



Note: You may have to remove the print cartridge before you can pull the envelope out.

8 **Close the upper front door.**

9 **Align the tabs on the envelope feeder with the slots on both sides of the printer and gently push the envelope feeder into the opening until it snaps into place.**

10 **Replace the stack of envelopes in the envelope feeder.**

11 **Adjust the envelope edge guide if needed.**

12 **Rotate the envelope weight and lower it to the stack.**

27x Paper Jam - Check Bin x

Jams in the following three areas result in a 27x attendance message. x represents the optional output expander number where the jam has occurred. Paper jams in output expanders may be:

- at the exit to an output expander tray
- between two output expanders in the pass through area
- at the exit to an output expander tray, but there is resistance

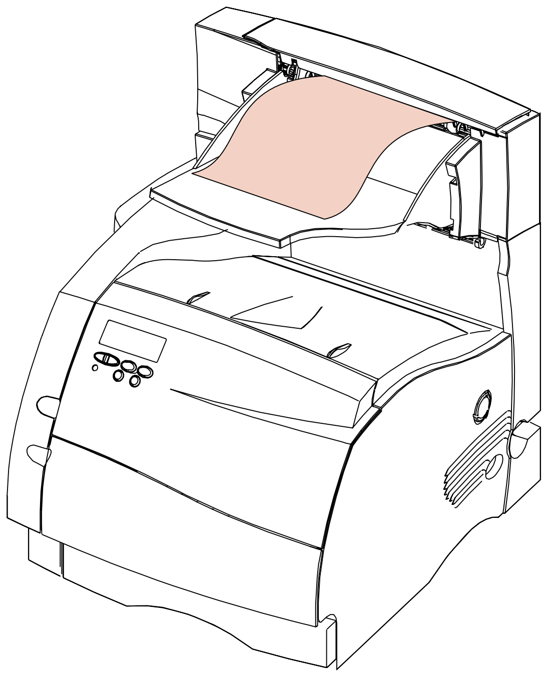
To avoid tearing print materials, pull the jammed print material out gently and slowly.

Note: To resolve the paper jam attendance messages, you must clear all paper from the paper path. If more than one paper jam occurs and you have more than one output expander installed, it is best to start from the bottom output expander and work your way up looking for paper jams. All paper must be cleared from the entire paper path of all output expanders even if only one paper jam occurs.

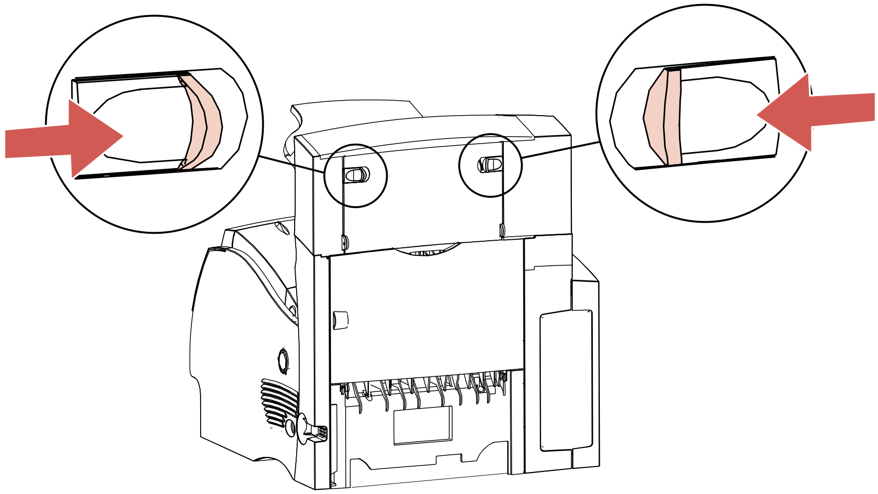
In an Output Expander Tray

Paper jams as it exits to an output expander tray and a long portion of the paper is visible.

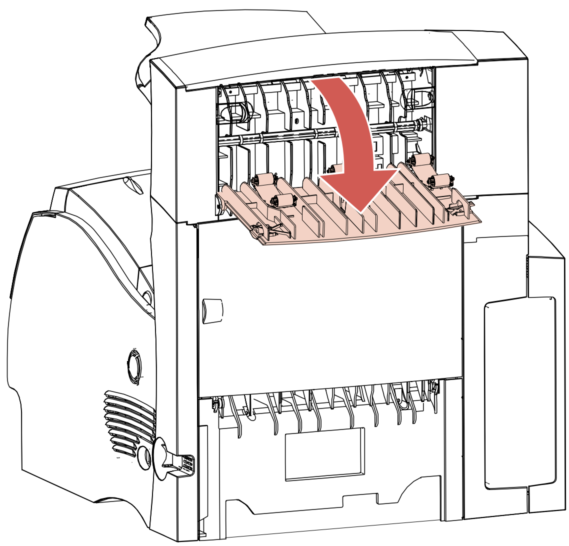
1 **Pull the paper straight out.** If there is more than minimal resistance to the paper, and it does not give immediately when you pull, stop pulling. Continue with the next step.



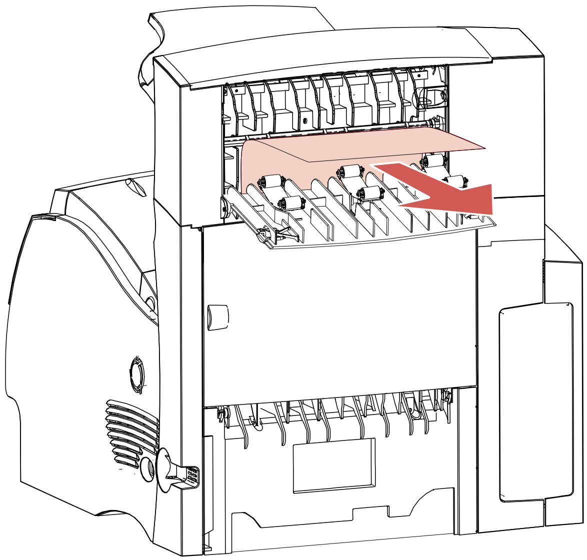
2 Locate and push the output expander rear door latches in toward the center.



The rear door opens and drops down fully.



3 **Loosen the paper if it is caught in feeder rollers. Then, pull the paper straight out.**

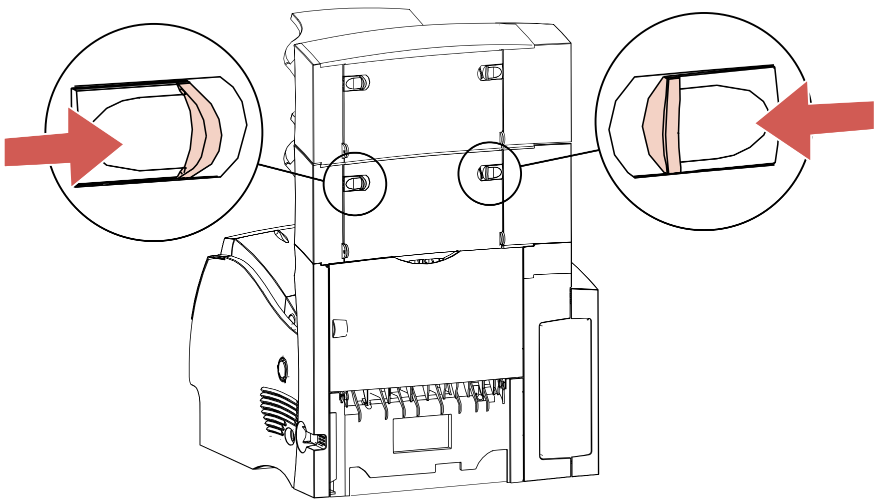


4 **Close the output expander rear door. Make sure both rear door latches are closed.**

Between Output Expanders

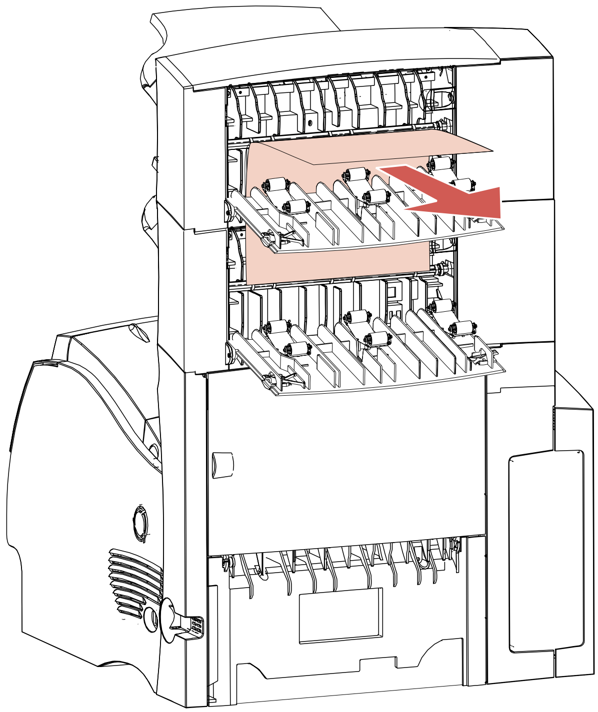
You should be able to remove the paper jam from the output expander indicated by the message; however, in this case you may need to open the rear door of another output expander to remove the jam since the paper is between two output expanders.

1 **Locate and push the latches in toward the center.** The output expander rear door opens and drops down fully.



2 **Open the output expander rear door for the output expander installed above.**

3 **Pull the paper straight out from the expander that has more clearance space to access the jam.**



While you have two output expander rear doors open, check to see if you have jams as described in “In an Output Expander Tray, But Resistance” on page 244.

4 **Close both of the output expander rear doors. Make sure all rear door latches are closed.**

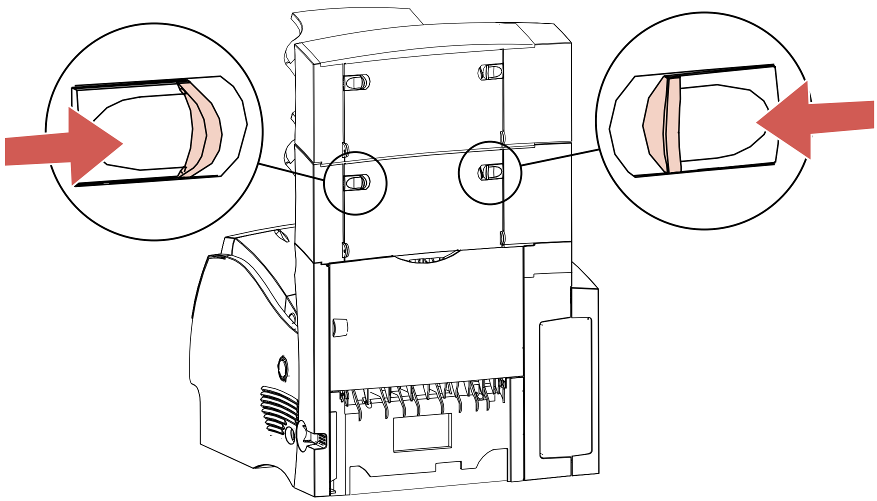
Clearing Jams

In an Output Expander Tray, But Resistance

Paper jams as it exits to an output expander tray and a short portion of the paper is visible.

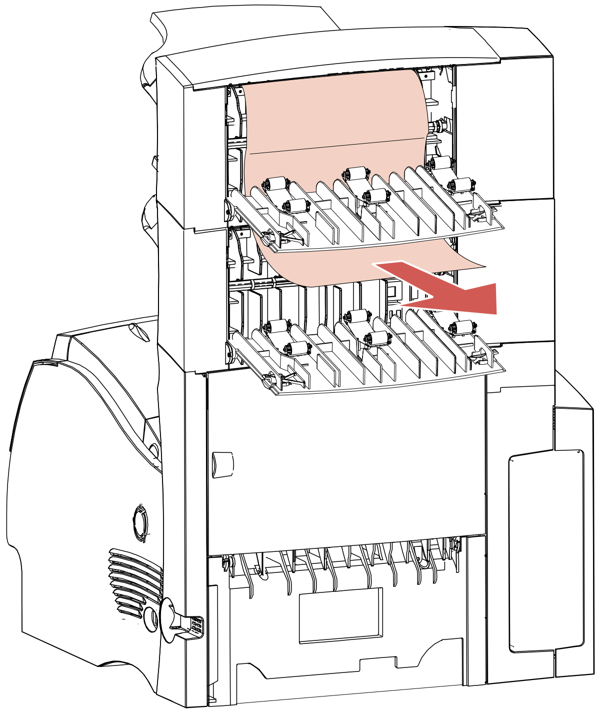
Try to pull the paper from the front of the tray first, but if you are not successful complete the following steps.

1. **Locate the paper jam that is visible from an output expander tray.**
2. **Locate and push the latches in toward the center.** The output expander rear door opens and drops down fully.



3. **Open the output expander rear door for the one installed above. When complete, two output expander rear doors are open.**

4 **Pull the paper from the back area of the output expander straight out toward you. Pull the paper from the output expander with more clearance space.**



5 **Close both of the output expander rear doors. Make sure all rear door latches are closed.**

Maintaining Your Printer

Chapter 10

Even though your printer is easy to maintain, you may want to designate a key operator to do the setup and maintenance of your printer. All users sharing the printer should refer printing problems and maintenance tasks to this key operator.

From time to time, you'll need to replace the print cartridge and fuser cleaner, clean the printer, and replace the charge roll. Replacement of routine maintenance items (fuser assembly, transfer roller, charge roll and paper feed rollers) should be done at regular intervals to maintain top performance and avoid print quality problems and paper feed problems resulting from worn parts. Optra S 2455 displays an **80 Scheduled Maintenance** message, after you have printed 250,000 pages, to let you know that these items should be replaced.

For your convenience, Lexmark offers a maintenance kit that contains the routine maintenance parts needed for the Optra S 2455. To purchase a maintenance kit, contact Lexmark or the place where you bought your printer. We recommend that the maintenance kit items be installed by a trained servicer. If you purchase your maintenance kit directly from Lexmark, labor to install these items is included during the product warranty period.

The Lexmark maintenance kit part numbers are:

Description Volts/Watts	Optra S 2455
115V, 750W	99A0500
220V, 750W	99A0503

Ordering a Print Cartridge

We recommend you order a new print cartridge when the printer first displays the **Toner Low** message. You will want to have it on hand when the current one no longer prints satisfactorily.

There are three recommended print cartridges specifically designed for your printer.

Pre*bate™ Print Cartridge Part Numbers	**Yield (Average)**	**Coverage (Approximate)**
1382920	7,500 pages	5%
1382925	17,600 pages	5%
1382929 (cartridge, shipped with label fuser cleaner, is for special label machine use**)	17,600 pages	5%

If you're in the U.S. or Canada, call 1-800-438-2468 for information about Lexmark Authorized Supplies Dealers in your area. In other countries, contact the place where you bought your printer.

Ordering a Label Fuser Cleaner

A special label fuser cleaner should be used for label applications to optimize feeding reliability. They are included in the print cartridge box when you order part number 1382929. You may order this item separately using part number 43H0814.**

* To order regular priced cartridges without *Pre*bate discount and terms, order part number 1382625 (17,600 pages).

** Label fuser cleaners are not recommended in your duplex (two-sided) printing applications.

Storing the Print Cartridge

Store the print cartridge in the original packaging until you are ready to install it.

Do not store the print cartridge in:

- Temperatures greater than 43°C (110°F)
- An environment with extreme changes in humidity or temperature
- Direct sunlight
- Dusty places
- A car for a long time
- An environment where corrosive gases are present
- An environment with salty air

Replacing the Print Cartridge

Complete the following steps to replace the print cartridge. Refer to the documentation inside the print cartridge box for detailed instructions to complete these steps.

1. **Remove the used print cartridge.**
2. **Clean the printer.**
3. **Install the new print cartridge.**
4. **Replace the fuser cleaner.**
5. **Follow the instructions on the new print cartridge box to recycle the used cartridge.**

When you return a used cartridge, you contribute to a worldwide recycling effort at no cost to you.

Note: Lexmark does not recommend that you refill your used print cartridge or purchase a refilled cartridge from a third party. Print quality and printer reliability cannot be guaranteed if you do. The cartridge warranty is voided by unauthorized refilling.

Ordering a Charge Roll Kit

We recommend you order a new charge roll kit when toner fog or background shading appears on printed pages. Order Lexmark part number 1382990. Installation instructions are included in the kit.

If you're in the U.S. or Canada, call 1-800-438-2468 for information about Lexmark Authorized Supplies Dealers in your area. In other countries, contact the place where you bought your printer.

Installing Options

Adding Options to the Printer

Chapter 11

There are several options available for your printer. Since some of them are installed below and others are installed above the printer, you should consider the order to add them.

Start with features and options that are installed below the printer. Place the first one to be installed on a sturdy, low table or on the optional printer cabinet. Then, install the printer or next option on top of it. See the illustrations on pages 2, 3, and 4 for the correct order to install options on your printer.

Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

Other options are installed on the printer system board inside the printer.

Use the table on the following page to find the information you need to add standard equipment and options to your printer.

.

For Information About...	Attaches to the Printer	See Page...
INA Option	System Board	309
Tri-Port Interface Option	System Board	310
Parallel 1284-C Adapter Option	System Board	311
Hard Disk with Adapter Option	System Board	312
Infrared Adapter Option	Infrared port on the Tri-Port Interface Option	321
Printer Memory Option	System Board	299
Flash Memory Option	System Board	304
Optional Drawers	Below	255
Standard Dual 500-sheet Drawer for the Optra S 2455	Below	7 or 256
Duplex Option	Below	273
Optional Envelope Feeder	Inside Lower Front Door	261
Optional Output Expander	Above	281

WARNING: When you install or remove the printer, the standard dual 500-sheet drawer for the Optra S 2455, and options, view each piece as a separate part. Always install or remove a part by itself. For example, do not pick up the printer with the duplex option attached and try to move both at once.

Optional Drawers

Chapter 12

The following table gives information for the optional 250-sheet drawer and optional 500-sheet drawer depending on which printer model you have:

	Optra S 1255 Optra S 1625 Optra S 2455	Optra S 1855
Optional drawers	• 250-sheet drawer • 500-sheet drawer Note: You may install two 250-sheet drawers or two 500-sheet drawers or one of each type for a total of 2 optional drawers.	• 250-sheet drawer • 500-sheet drawer Note: You may install three 250-sheet drawers or three 500-sheet drawers or any combination for a total of 3 optional drawers.

Note: A 2000-sheet drawer is available and may be substituted for any one optional drawer.

Each optional drawer consists of a support unit and a paper tray.

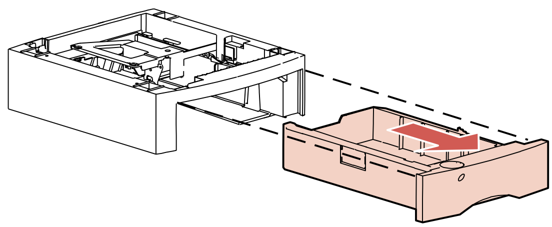
All support units and trays are installed in the same manner. The only physical difference between optional drawers is the depth.

Installing an Optional Drawer

If your printer is already set up, make sure the printer power is Off (O). Unplug the power cord, and disconnect any cables attached to the printer.

An optional drawer consists of a support unit and a paper tray.

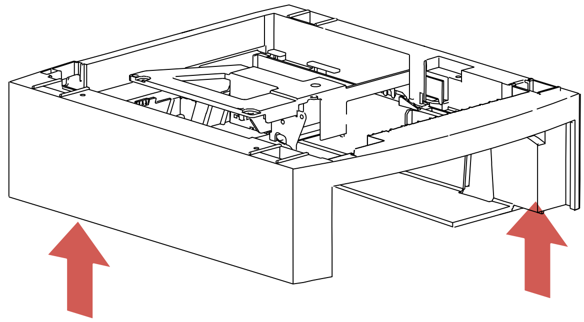
1. **Remove the support unit from its packaging.** Remove any packing tape.
2. **Pull the paper tray out of the support unit.** Remove any packing material and tape from the paper tray.



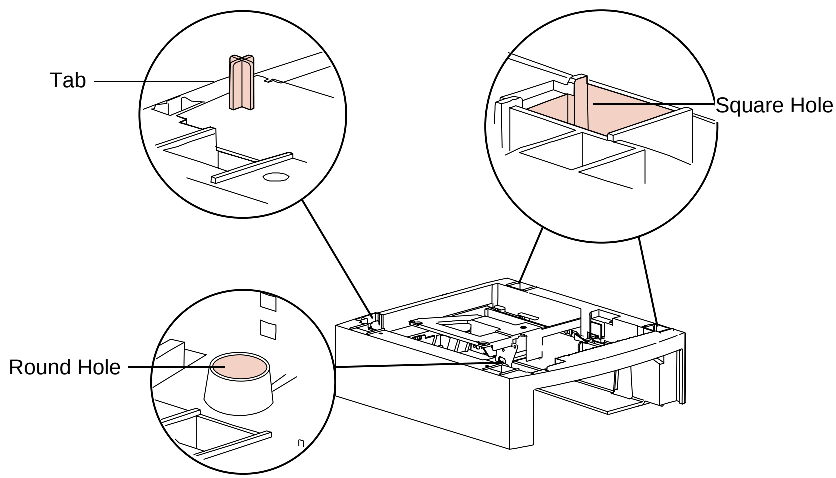
Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

Note: Decide on a location to set the support unit. *The printer will be placed on top of it*, so allow enough clearance space. The location must be sturdy and large enough to accommodate the printer and all installed options.

3 **Grasp the support unit on each side at opposite corners and move it to the location being used.**



4 **Notice the following parts located on the top surface of any optional support unit: the tab, the round hole, and the four square holes.**



At this point, attach another optional drawer or the printer. To attach a drawer, continue with step 5 through step 7 on page 258. To attach the printer, continue with step 8 on page 259.

Note: If you have a duplex option, install it after you install all support units and before you install the printer. For more information, see “Installing the Duplex Option” on page 273.

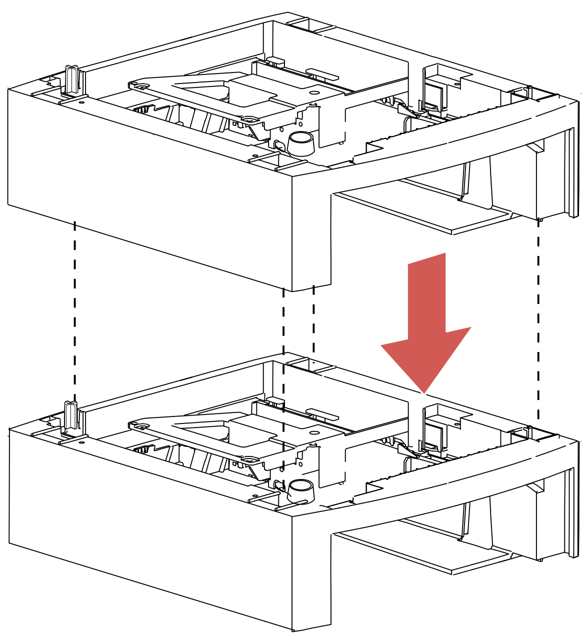
5 **Remove the support unit from its packaging.** Remove any packing tape.

6 **Pull the paper tray out of the support unit.** Remove any packing material and tape from the paper tray

7 **Grasp the support unit on each side at opposite corners and lower it onto the top of the previous support unit.** Be sure the edges of both support units are aligned so that all the parts (tab, round hole, four square holes) fit in the matching holes and feet.

Note: The bottom surface of each support unit has matching holes or feet that accommodate the tab, round hole, and four square holes.

Be sure the support unit is securely in place on the other support unit.

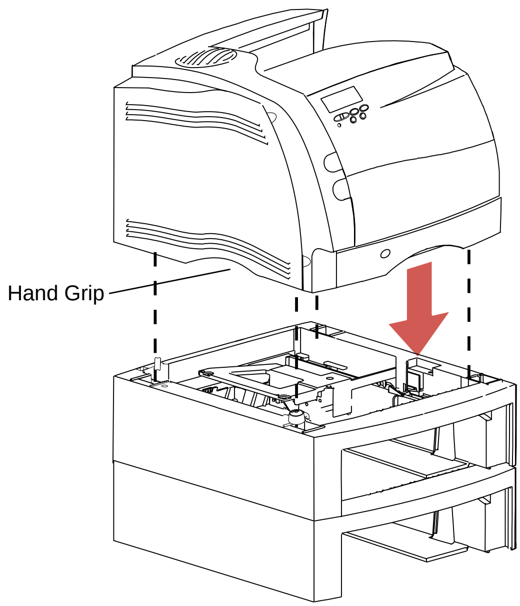


8 **Lift the printer by the hand grips or ask someone to help you lift the printer.**

The bottom surface of the printer has matching holes or feet that accommodate the tab, round hole, and four square holes.

CAUTION: Make sure your fingers are not under the printer when you set it down.

9 **Place the printer on top of the support unit.** Be sure the edges of the printer and the support unit are aligned so that all the parts fit. The right side of the printer is aligned with the options.



10 **Load paper in the trays.** See "Loading a Paper Tray" on page 146.

11 **Install the trays in the matching support units.**

12 **Attach the decals to the support units and the trays.** See "Attaching the Decals" on page 11.

13 **Reconnect any disconnected cables.**

14 **Plug in the printer power cord.**

15 **Turn the printer power On (|).**

Note: Verify that the optional drawer is installed properly. See “Verifying the Installation of Options” on page 325.

16 **From the operator panel, set the PAPER TYPE menu setting for each paper source.**

Note: The 250-sheet input tray in the printer is Tray 1. Trays for support units installed under the printer are numbered Tray 2 down to Tray 5 depending on the number of optional drawers installed. For more information, see “Paper Sources” on page 140 and “Attaching the Decals” on page 11.

17 **Press Go to take you to the Ready status message.**

Envelope Feeder Option

Chapter 13

The envelope feeder option attaches to the front of your printer behind the lower front door. It can be removed when you are not using it, making the printer more compact.

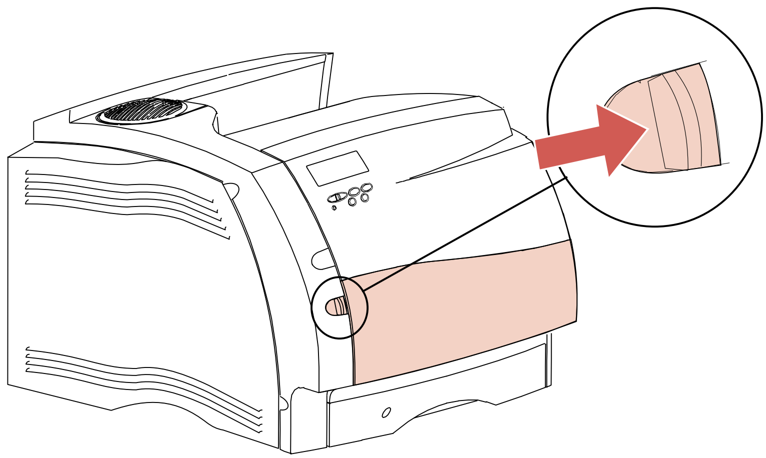
You may install the envelope feeder without turning the printer off first, but *do not* remove it when the printer is on. The message **Reattach Envelope Feeder** displays if you remove the envelope feeder when the printer is on. When this message is posted, you must reconnect the option. In this case, you might be removing the envelope feeder just to clear a jam.

If you want to remove the envelope feeder for a long period when you do not really need to print envelopes, wait until the printer displays **Ready**. Turn the printer off. Remove the envelope feeder and turn the printer on.

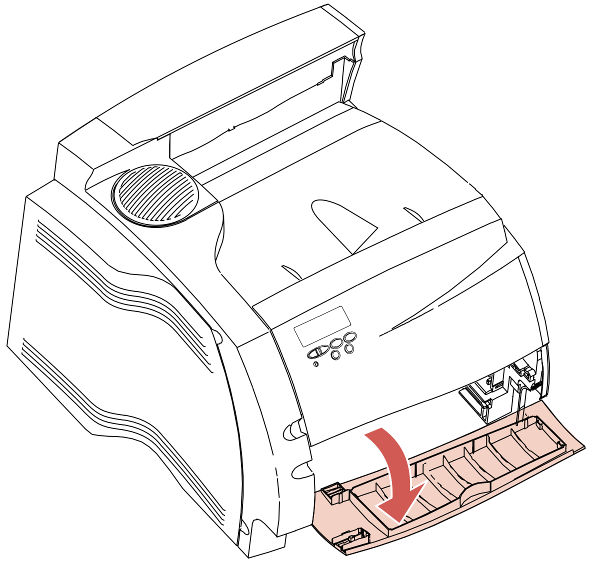
Installing the Envelope Feeder

Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

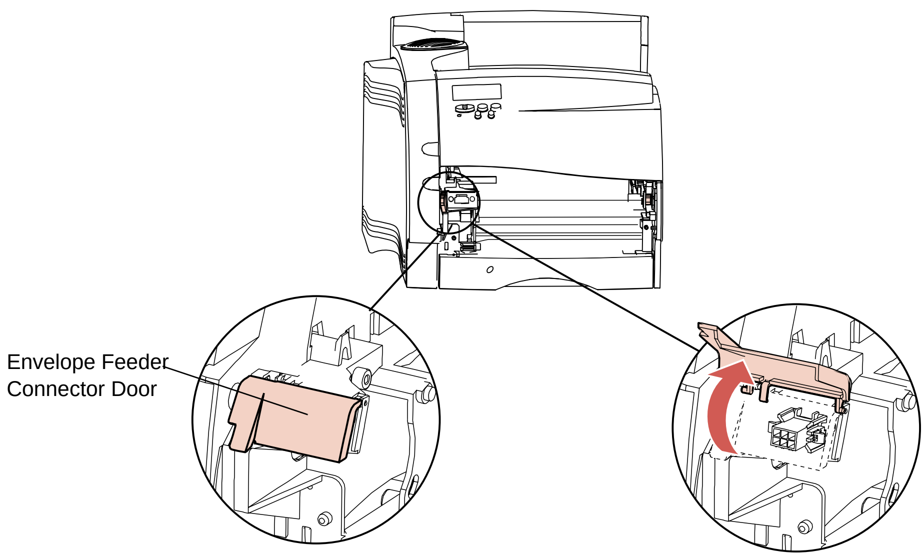
1. **Turn the printer power Off (O).**
2. **Push the lower release latch on the front left side of the printer to the right to release the door.**



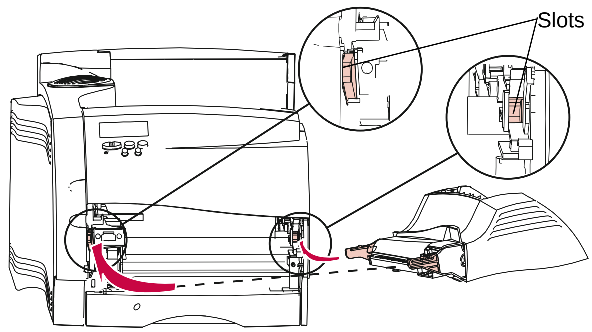
The door drops open and stops in place.



3 **Grasp the lower right corner of the envelope feeder connector door and pull it up.** The connector is exposed.



4 **Align the tabs on the envelope feeder with the slots on both sides of the printer and gently push the envelope feeder into the opening until it snaps into place.** The envelope feeder tilts downward at a slight angle if it is installed properly.



5 **Turn the printer power On (|).**

Note: Verify that the envelope feeder is installed properly. See “Verifying the Installation of Options” on page 325.

Envelope Feeder Option

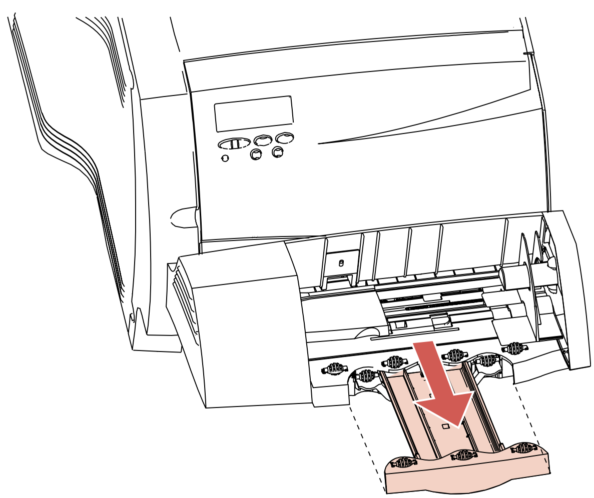
Envelope Feeder Guidelines

- Load only one size of envelopes at a time in the envelope feeder.
- To achieve the best possible print quality, use only high-quality print material that is designed for use in laser printers. For more guidelines on envelopes, see “Print Materials” on page 124.
- Do not place objects on the envelope feeder. Also, avoid pressing down or applying excessive force on it.

Loading the Envelope Feeder

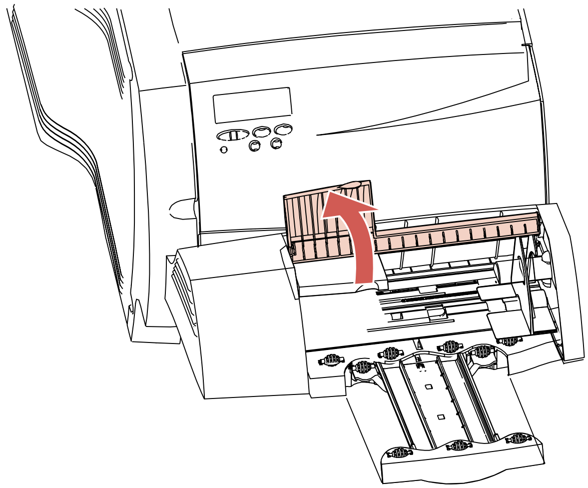
The envelope support has three positions: fully closed (pushed in toward printer) for short envelopes, extended to the middle position for medium-length envelopes, and fully open (extended to its full length) for long envelopes.

1 **Gently adjust the envelope support for the size you plan to load.**

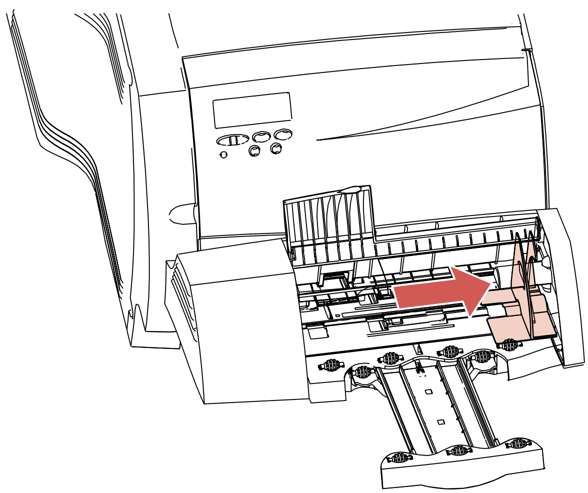


2 **Slide the attached envelope weight up.**

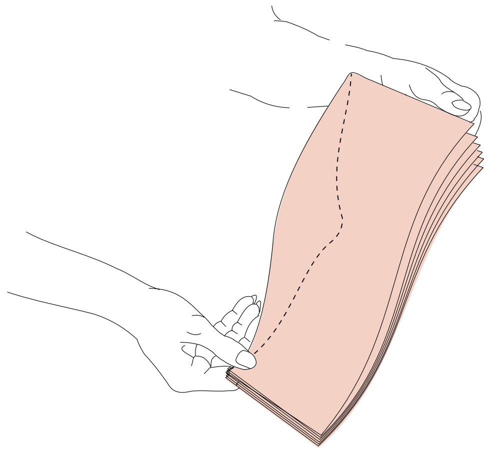
3 **Flip the envelope weight over and back toward the printer.** It stays in place**.**



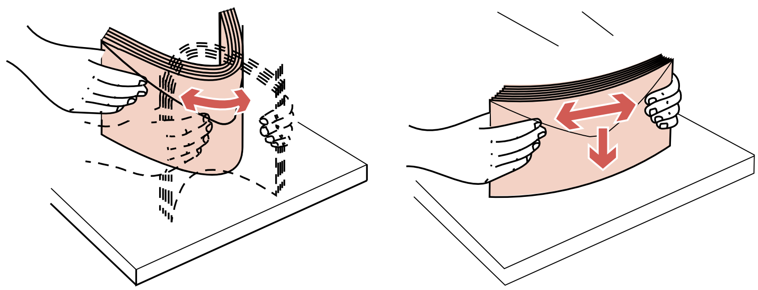
4 **Slide the envelope edge guide to the far right.**



5 **Flex a stack of envelopes back and forth.**



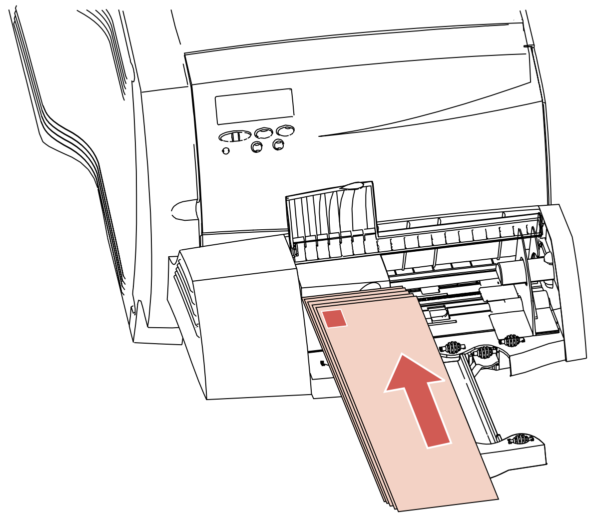
6 **Straighten the edges on a level surface.** Press down the corners to flatten them. Fan the envelopes. This prevents the edges of the envelopes from sticking together and helps them feed properly.



Note: When you load envelopes, do not exceed the maximum stack height of 64.7 mm (2.55 in.). The envelope feeder holds a maximum of 85 envelopes (75 g / m^2, 20 lb bond).

7 **Load the stack of envelopes with the address side up and flap side down.** The flap side edge of the envelope should be facing the left side of the envelope feeder. Make sure the envelopes at the bottom of the stack slide into the envelope feeder slightly more than the ones at the top of the stack.

Note: Do not try to load more envelopes by forcing them under the envelope feeder weight. This results in jams.

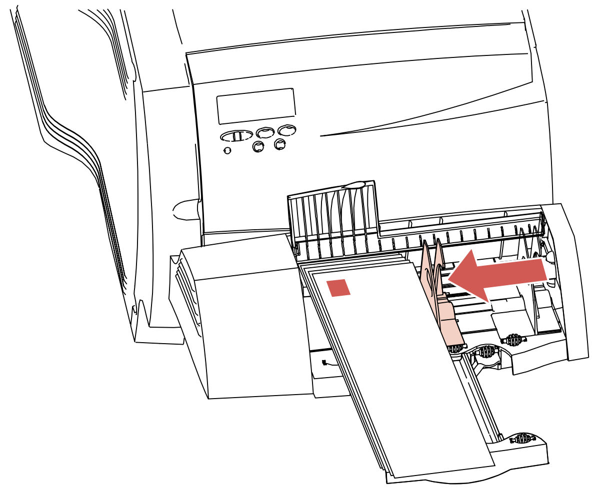


Note: Do not feed stamped envelopes. The stamp is shown for placement only.

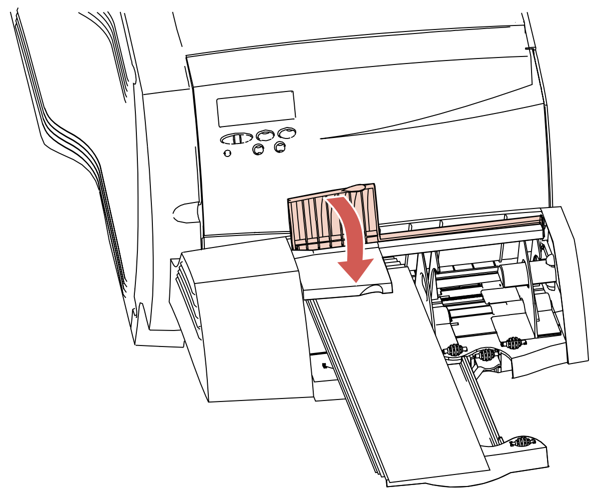
WARNING: Never use envelopes with clasps, snaps, windows, coated linings, or self-stick adhesives. These envelopes may severely damage the printer. See “Envelope Guidelines” on page 130 for more information.

Envelope Feeder Option

8 **Slide the envelope edge guide to the left until it lightly touches the side of the stack.** Make sure the envelopes do not buckle.



9 **Rotate the envelope weight back toward you and lower it to the stack.**



Using the Envelope Feeder

After loading envelopes in the envelope feeder, select the paper source from your software application, and then select the paper size and type from both your software application and from the printer operator panel.

To set the printer operator panel:

1 **Make sure the PAPER SIZE for the envelope feeder (Env Feeder Size) is set to the correct envelope size you are loading.**

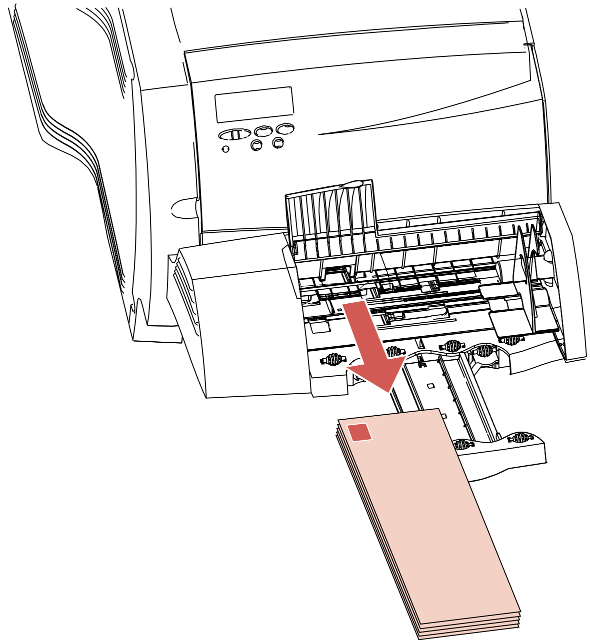
2 **Press Go to return the printer to the Ready status message.**

Note: Software settings may override operator panel settings.

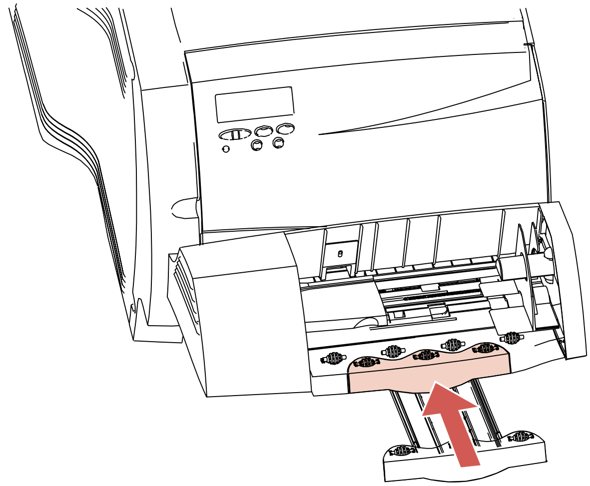
If the printer experiences an envelope jam while printing, see “260 Paper Jam - Check Env Feeder” on page 234 for information on how to clear the jam.

Removing the Envelope Feeder

1 **Remove envelopes from the envelope feeder.**

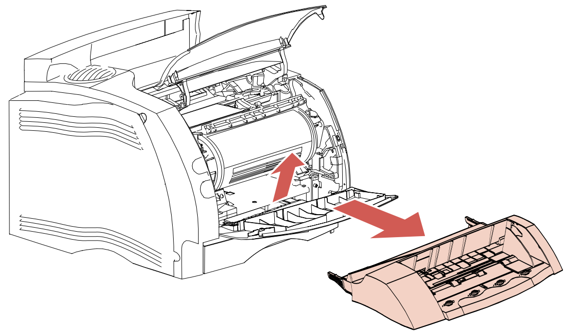


2 **Push the envelope support to the closed position.**



3 **Open the upper front door.**

4 **Pull the envelope feeder up slightly and straight out of the printer.** Set it aside.



5 **Close both front doors.**

Duplex Option

Chapter 14

The duplex option enables the printer to print on both sides of the paper.

The duplex option attaches under the printer, below the 250-sheet input tray and above any other drawers. The printer automatically recognizes that the duplex option has been installed. If you need to remove the duplex option, turn the printer off first. If you need to reinstall the duplex option, turn the printer off, reinstall, and turn the printer on.

When the duplex option is installed, you can print either duplex pages or single-sided pages. See “Changing Duplex Settings” on page 278 for more information.

For more information, see “Duplexing (Two-Sided Printing)” on page 152.

Installing the Duplex Option

If you are stacking several options, see “Adding Options to the Printer” on page 253 before you install the duplex option.

Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

To install the duplex option:

1 **Turn the printer power Off (O).**

2 **Unplug the printer power cord.**

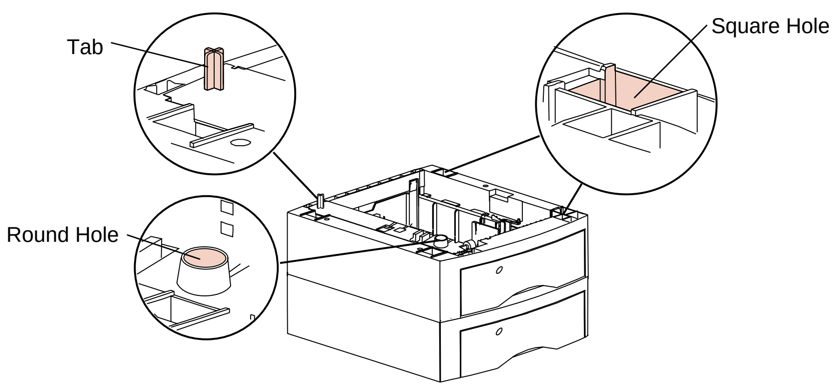
3 **Disconnect any cables attached to the printer.**

4 **Select a sturdy place to set the printer while you install the duplex option.**

5 **Use the hand grips or ask someone to help you lift the printer off of any other installed drawers.** You can remove the 250-sheet input tray from its slot to make the printer lighter.

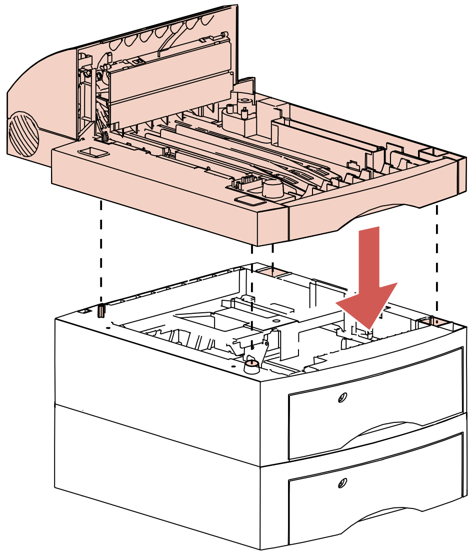
Note: Make sure your fingers are not under the printer when you set it down.

6 **Notice the following parts located on the top of any other drawer: the tab, the round hole, and the four square holes.** The duplex option has matching holes or feet on its bottom surface that align with these parts.

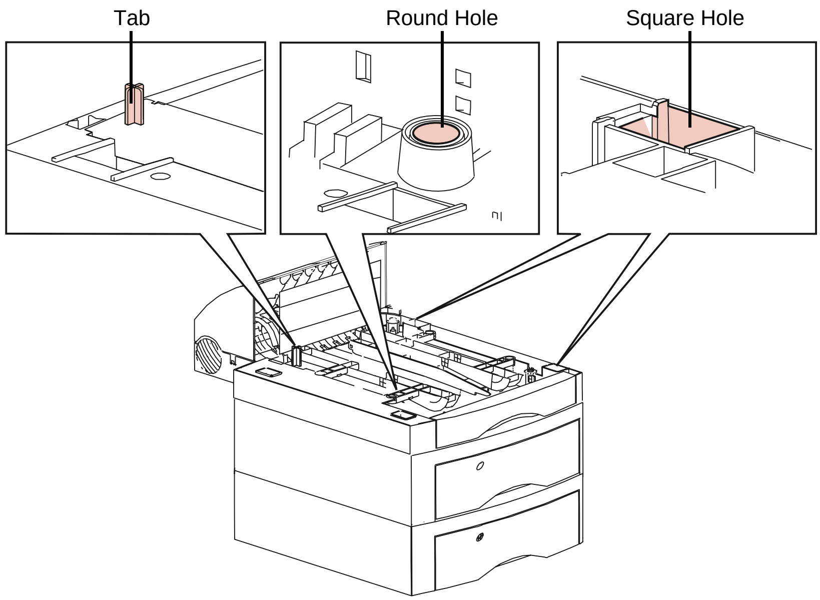


Note: When you lift the duplex option for placement, remember it contains the removable duplex front access cover. Lift the duplex option from the bottom at opposite corners. Keep the duplex option level as you move it so the duplex front access cover does not fall out.

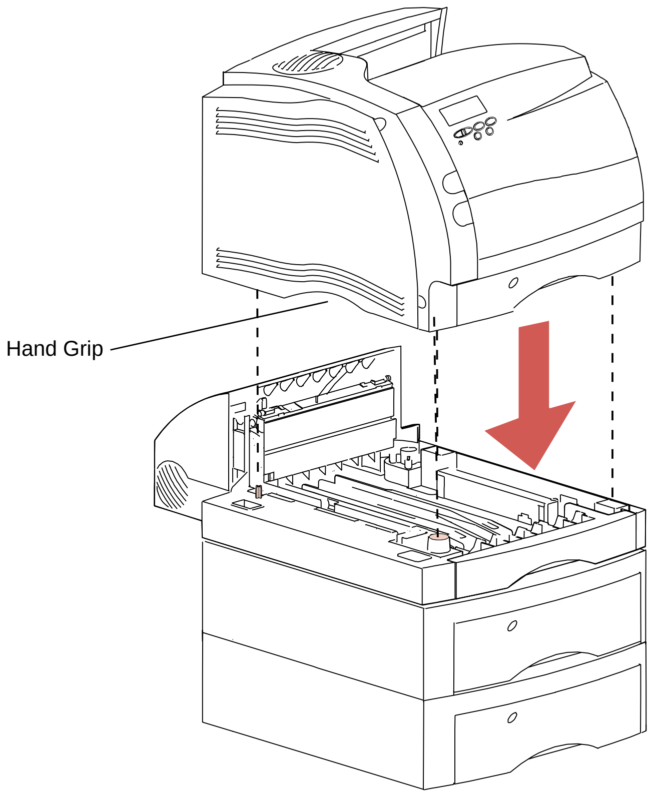
7 **Lift and lower the duplex option onto the top optional or standard paper drawer.** Be sure the edges of the duplex option are aligned with the drawer underneath so that all the parts fit.



8 **Notice the following parts on the duplex option: the tab, the round hole, and the four square holes.** These are exactly like the same parts on an optional or standard paper drawer. The printer has matching holes on its bottom surface that align with these parts.



9 **Lift the printer by the hand grips or ask someone to help you lift it and lower it onto the duplex option.** Be sure the edges of the printer and the duplex option are aligned so that all the parts fit.



10 **Reconnect any disconnected cables.**

11 **Plug in the printer power cord.**

12 **Turn the printer power On (|).**

Note: Verify that the duplex option is installed properly. See "Verifying the Installation of Options" on page 325.

Changing Duplex Settings

You can select duplex functions from the operator panel or from your software application if it supports duplex printing. If the software setting differs from the operator panel setting, the software setting overrides the panel setting. For example, if you select duplex printing from the operator panel, but the software specifies single-sided printing, the printer prints single-sided pages.

When the Duplex Option is installed, the PAPER MENU includes the menu items Duplex and Duplex Bind. You can print duplex pages from any paper source except the envelope feeder.

The following table lists settings for the duplex option. A brief description of each menu item follows.

Menu Item	Values	Default Setting
Duplex	On, Off	Off (Single-sided printing)
Duplex Bind	Long Edge, Short Edge	Long Edge

Duplex

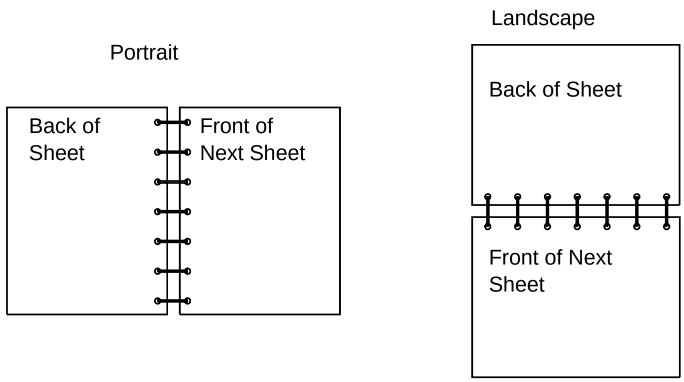
Set the Duplex menu item On to print on both sides of the paper. Set Duplex Off to print on one side only.

Duplex Bind

Duplex binding refers to the way pages are attached to form a book. Selecting the type of duplex binding determines how the printing on the back (even-numbered) pages of a print job is oriented in relation to the printing on the front (odd-numbered) pages.

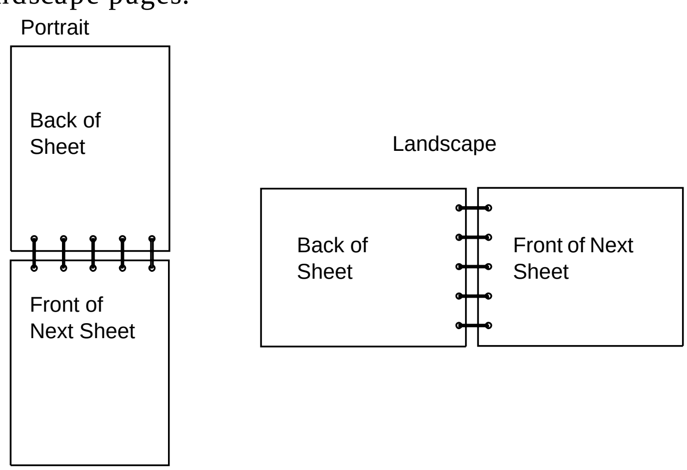
Long edge binding means all pages are attached along the long edge of the page (the left edge of a portrait-printed page and the top edge of a landscape-printed page). For example, the pages of this book were printed using long-edge binding.

The following illustration shows long-edge binding for portrait and landscape pages.



Short edge binding means all pages are attached along the short edge of the page (the top edge of a portrait printed page and the left edge of a landscape printed page). For example, the pages in a stenographer’s pad are bound along the short edge.

The following illustration shows short-edge binding for portrait and landscape pages.



Selecting Paper

The duplex option handles high-quality xerographic copier papers, office papers, and selected bond papers. For best results, use only non-recycled xerographic paper.

You can use the same weight and type of paper with the duplex option as you use with the printer. You can use overhead transparencies or envelopes for single-sided printing when the duplex option is installed but not selected.

See the table on page 125 and “Paper Size Specifications” on page 144 for more information on selecting paper. For information on duplex printing for letterhead or pre-printed materials, see page 150.

Output Expanders

Chapter 15

You can install up to three optional output expanders on an Optra S 2455 or Optra S 1855. They are mounted on top of the printer or on top of each other.

Your printer may have up to five paper sources, so you may need more than just the printer standard bin to handle the output. See “Paper Exits (Output Bins)” on page 153 for an explanation of how many sheets each model can accommodate in the printer standard bin. Once one or more of the optional output expanders are attached to an Optra S 2455 or Optra S 1855, the printer can handle a higher output of print materials.

Each output expander consists of the expander and a removable output expander tray.

WARNING: Do not use an output expander tray as a shelf to hold office items or books. Each output expander tray is designed to hold the weight of print material only. If more weight is placed on an output expander tray, it disengages from the output expander. The output expander tray or its contents may be damaged if it falls to the floor.

Each optional output expander is packaged separately with its tray packed on top of the output expander. Carefully unpack the tray and the output expander.

WARNING: When you unpack an optional output expander, install it on the printer or another previously installed output expander immediately; otherwise, the mounting

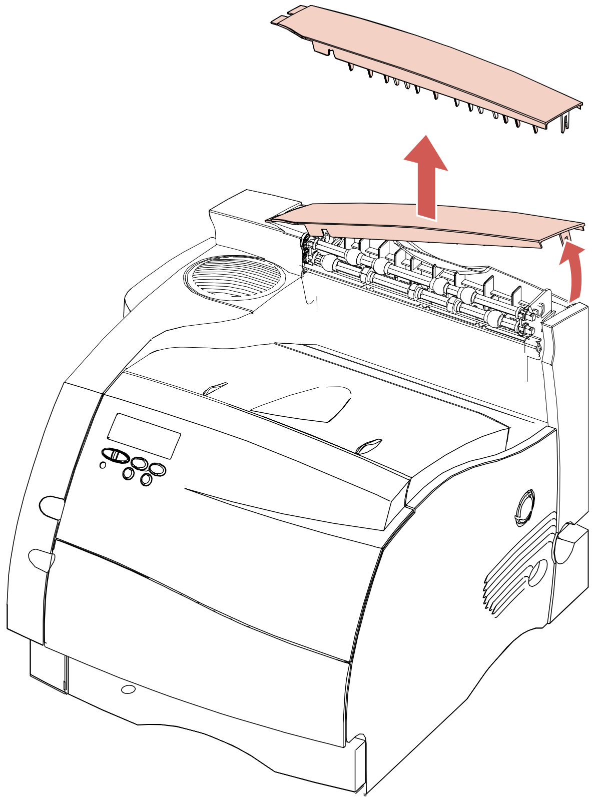
brackets could cause damage, such as scratches or cuts, to tabletops or fabrics.

Installing an Optional Output Expander

Note: Options compatible with the Optra S 1855 are labeled with a colored circle. If the option is not labeled with a colored circle, do not install it on an Optra S 1855. See the table on page 1 for the location of the label.

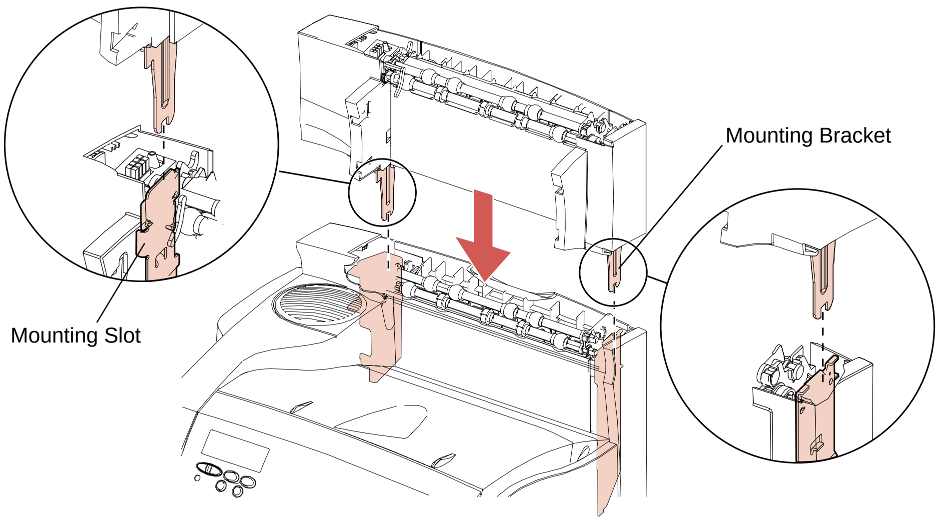
1 **Turn the printer power Off (O).**

2 **Grasp the top cover and pull it up to remove it.**



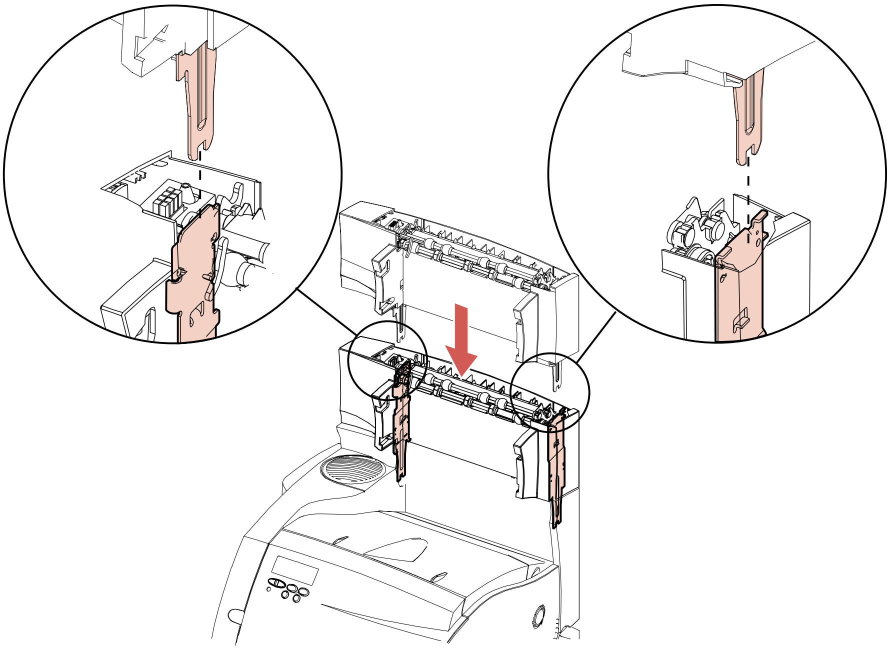
The top portion of the printer is exposed.

3 **Insert the mounting brackets located on each side of the output expander into the mounting slots located on each side of the exposed area in the top portion of the printer.** To help maintain alignment of the brackets to the slots, align the right and back edges of the output expander with the corresponding edges of the top portion of the printer.



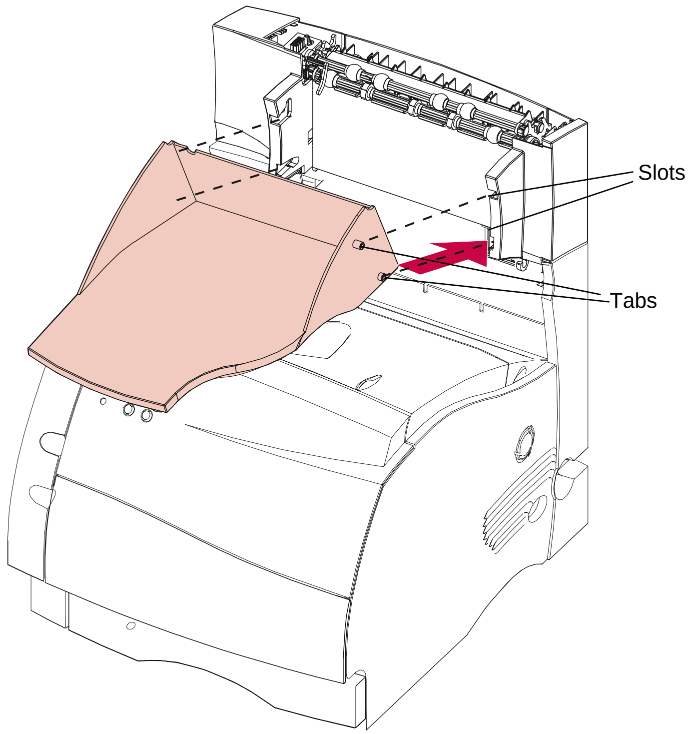
Note: Make sure the output expander is connected securely.

If you follow these steps to install a output expander on top of another one, the mounting slots on the output expander look as shown:

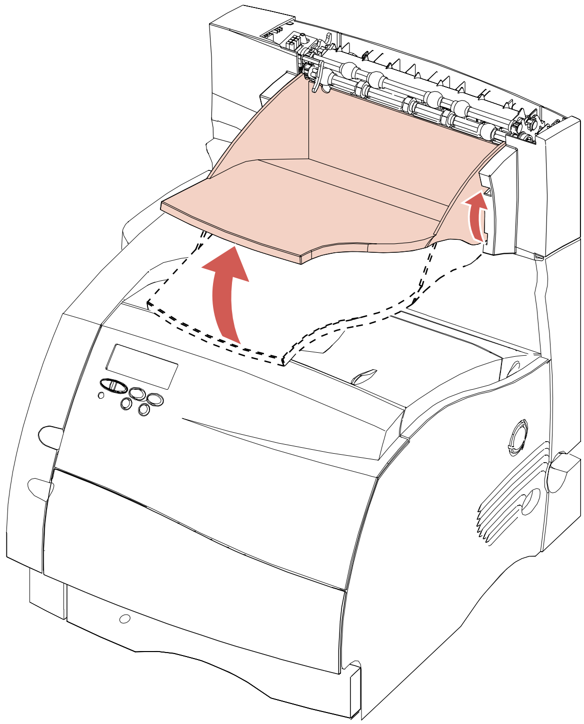


4 **Locate the four tabs on the output expander tray and the four slots on the output expander.** There are two of each on each side.

5 **Hold the output expander tray on both sides and tilt the front toward you. Slide the lower tabs on the tray fully into the lower slots on the output expander.**



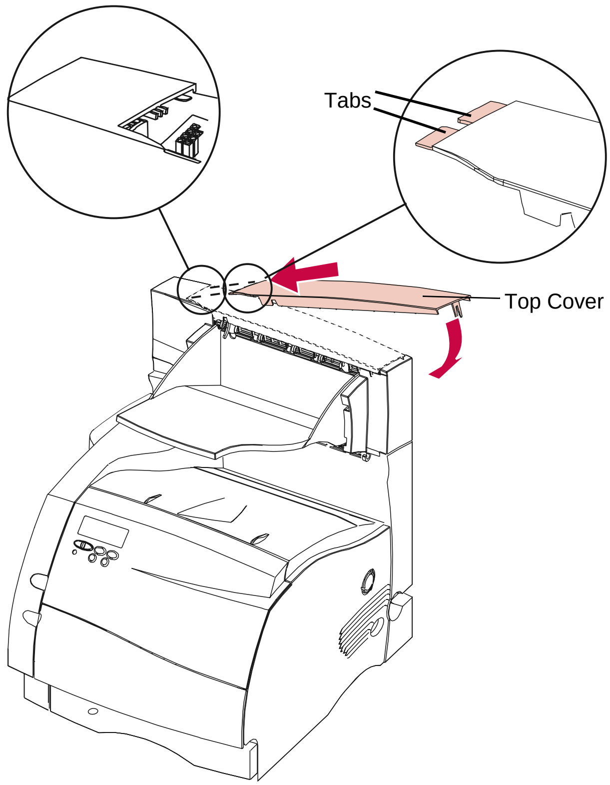
6 **Rotate the output expander tray upward from the front and slide the upper tabs on the tray into the upper slots on the output expander.** The tabs click in place**.**



Note: At this point, you may attach another output expander to the output expander you just installed. To do this, complete step 3 on page 284 again, but install the mounting brackets of the second expander into the mounting slots on the first output expander you installed. Complete step 4 on page 286 to step 6 on page 287 to install the second output expander tray.

7 **Align the tabs on the left side of the top cover with the left side of the opening at the top of the output expander.**
The tabs must go underneath the left side cover of the output expander.

8 **Push the right side of the top cover down until it snaps into place on the output expander.**



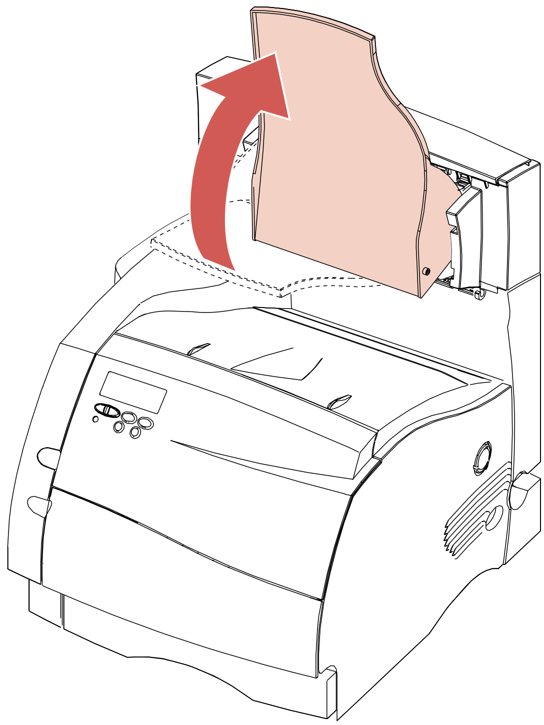
Note: Verify that the output expander is installed properly. See “Verifying the Installation of Options” on page 325.

9 **Turn the printer power On (|).**

Removing an Output Expander Tray

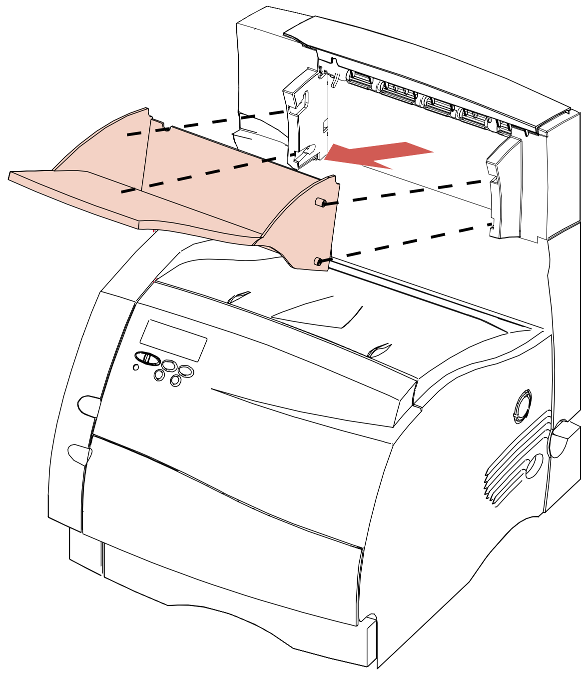
To remove the output expander tray:

1 **Hold the edge of the tray and lift it up so the lower tabs come out of the slots on the output expander.**



Output Expanders

2 **Pull the tray straight out toward you to remove the upper tabs from the output expander slots.**



Changing Output Bin Settings

You can select output bin functions from the operator panel or from your software application, if it supports output bin selection. If the software setting differs from the operator panel setting, the software setting overrides the panel setting.

For example, if you select **Bin 2** from the operator panel, but the software specifies the printer standard bin, the printer prints to the printer standard bin. If you select **Bin 2** from the operator panel, but the software specifies output bin 3, the printer prints to output bin 3.

The factory default is the printer standard bin, which is shown on the operator panel as **Standard Bin**. When one output option is installed, the PAPER MENU includes an additional value for the **Output Bin** setting, which is **Bin 1.** For example, if all optional output expanders are installed for the Optra S 2455, the operator panel displays all values for the Output Bin setting in the **PAPER MENU**: **Standard Bin**, **Bin 1**, **Bin 2**, and **Bin 3**.

Output Bin Linking

Output bin linking is set from the **PAPER MENU** with the **Configure Bins** menu item. The values for this item are **Mailbox**, the factory default, **Link** and **Link Optional**.

The **Configure Bins** menu item is only displayed if one or more output options are installed.

The **Mailbox** setting allows the Standard Bin and any output options to be selected individually. Print material is placed in the output bin selected by the print job. If a print job does not specify the output bin, the printed material goes to the default output bin. See Output Bin on page 66 for more information. When an output bin is full, the **Remove Paper** message is displayed and the printer stops printing until the printed material is removed from the output bin.

The **Link** setting allows for bin linking. Bin linking causes all the output bins (standard bin and output options) to be linked together as though they are one large bin. The printer fills the Standard Bin first. When it is full, the printer starts filling the first output option. As each output option is filled, the printer switches to the next installed output option. When the standard bin and all output options are full, the printer issues the **Remove Paper All Output Bins** message.

The **Link Optional** setting causes all output options to be linked together as though they are one large bin, while leaving the Standard Bin individually addressable. The printer fills the default output bin first. When it is full, the printer switches to the next installed output option. When all output options are full, the printer issues the **Remove Paper All Output Bins** message.

Memory and Option Cards

Chapter 16

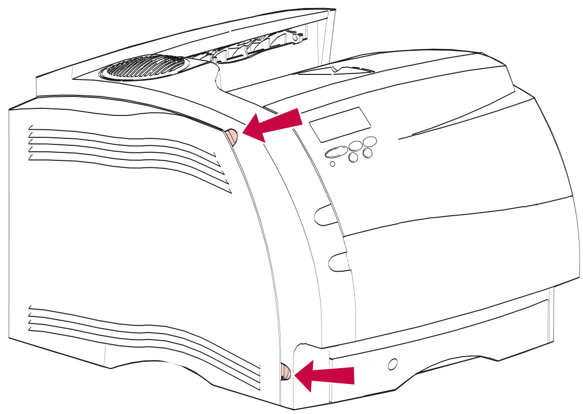
You can purchase optional memory and option cards for your printer to enhance its performance. Follow the instructions in this chapter to install them on your printer system board.

Accessing the Printer System Board

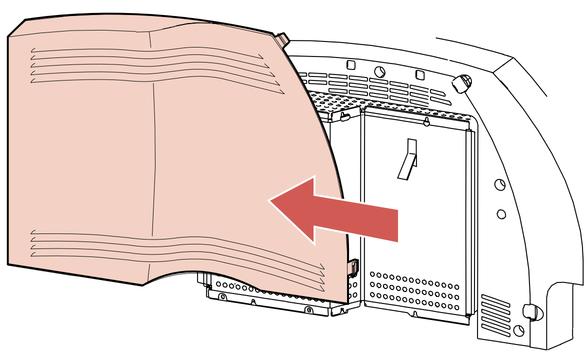
Complete the following steps before you install a printer memory option, flash memory option, or an option card. Instructions for installing and using the options follow these steps.

1. **Turn the printer power Off (O) and unplug the printer power cord.**
2. **Disconnect all cables from the back of the printer.**

3 **Press down and pull on the side door latches to release the door.**

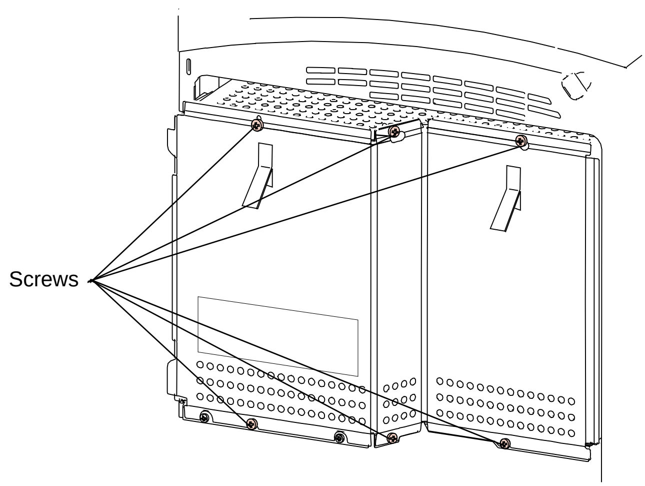


4 **Remove the side door, and lay it aside.**

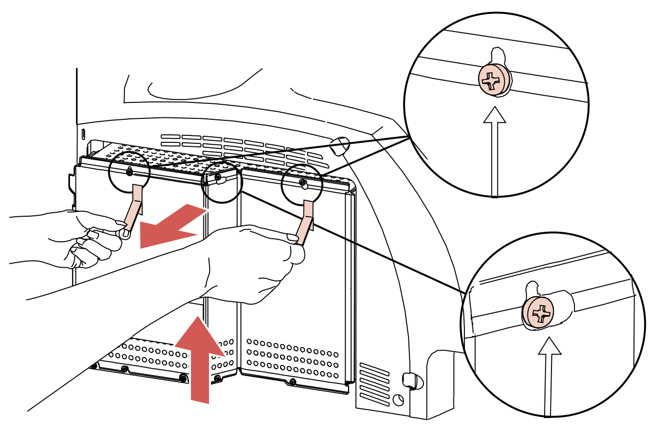


Memory and Option Cards

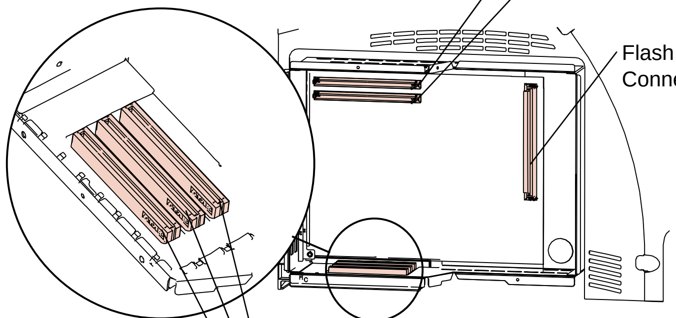
5 **Loosen the six screws on the shield. Do not remove the screws.**



6 **Grasp the tabs and slide the shield up until the top three screws fit into the three keyholes on the shield. Holding the shield by the tabs, lift it off.**



7 **Locate the appropriate connector for the option you want to install.**



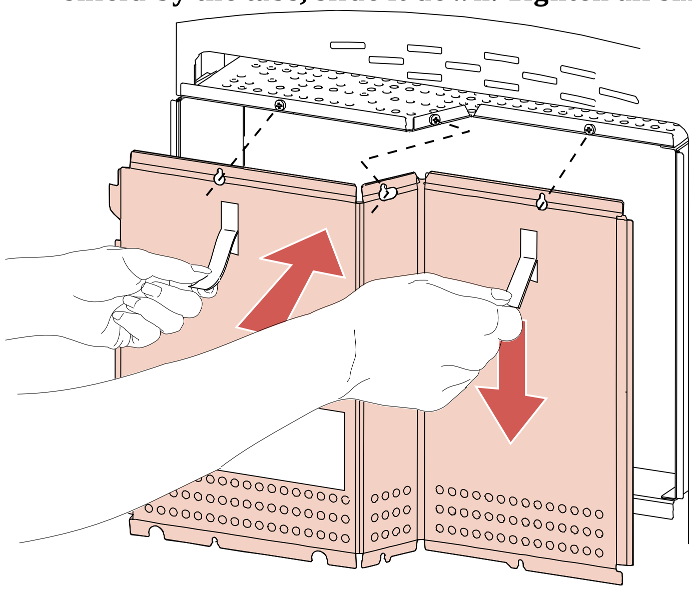
8 **Continue to the appropriate section for installation instructions:**

- See “Printer Memory Option” on page 299.
- See “Flash Memory Option” on page 304.
- See “Option Cards” on page 308.

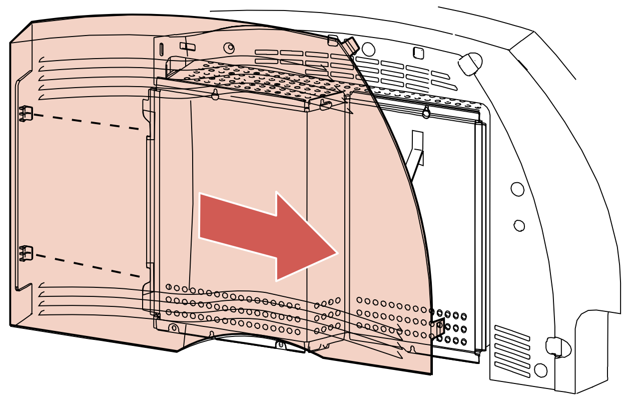
Closing the Printer System Board

After you have installed all of your options on the printer system board, follow these steps to reattach the shield and side door.

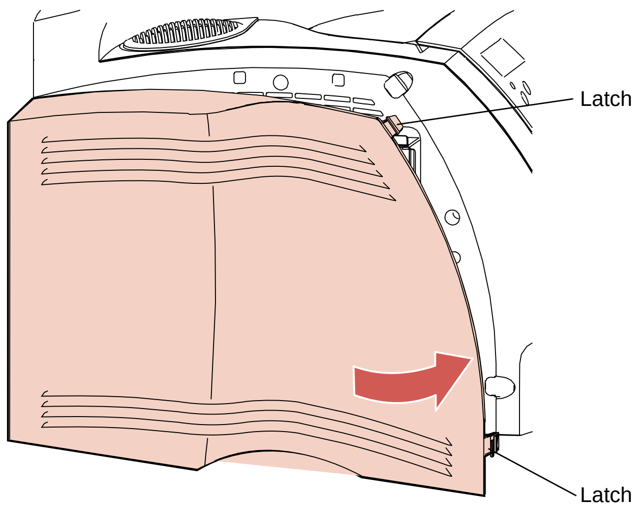
1 **Grasp the shield by the tabs and align the three keyholes on the shield with the top three screws. Holding the shield by the tabs, slide it down. Tighten all six screws.**



2 **Holding the side door slightly to the left of the printer, slide the door to the right into the notches on the shield.** The door hinges fit into the notches.



3 **Close the side door, pressing on the side door latches to snap it into place.**



4 **Reconnect the printer cables.**

5 **Plug in the printer power cord.**

6 **Turn the printer power on.**

Note: To verify that the option is installed properly, see “Verifying the Installation of Options” on page 325.

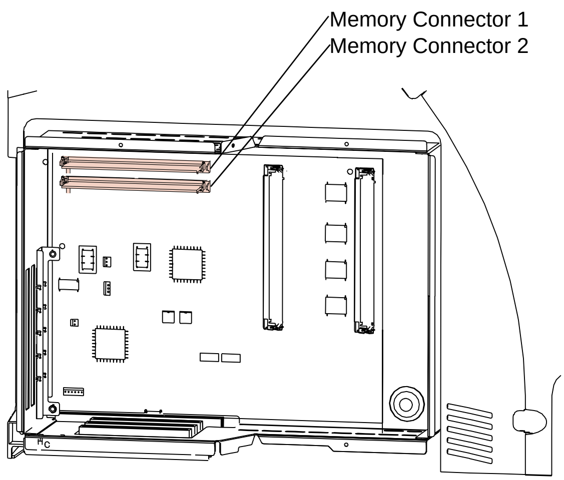
Printer Memory Option

The printer memory option increases the amount of dynamic random access memory (DRAM) in the printer. Additional printer memory allows the printer to print complex jobs and operate more efficiently. Anything that is stored in printer memory is lost when the printer is turned off.

You can buy optional cards with 4MB, 8MB, 16MB, 32MB and 64MB of memory.

Installing a Printer Memory Option

Install one memory option in memory connector 1. If you are installing two memory options, install the second one in memory connector 2.

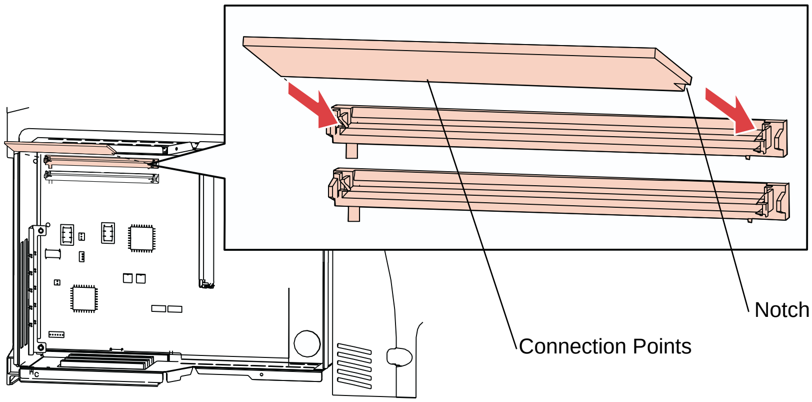


Before you install a memory option, follow the steps under “Accessing the Printer System Board” on page 293.

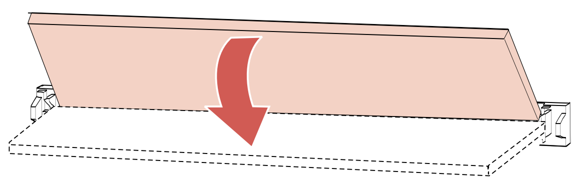
WARNING: Electronic components are easily damaged by static electricity. Touch something metal before you touch the memory option.

1 **Unpack the memory option.** Avoid touching the connection points along its edge. Save the packaging.

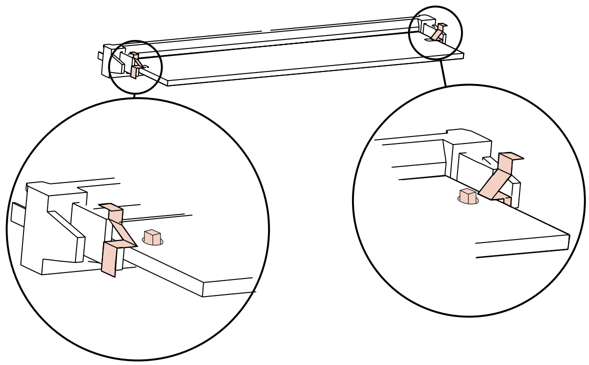
2 **Hold the memory option with the connection points pointing toward the system board and the notch toward the front of the printer.**



3 **Insert the memory option all the way into the connector at a 45° angle, and rotate it down until it snaps into place.**



4 **Make sure both metal clips on the connector are fastened and the two pins on the connector are pushed through the holes on the memory option.**



5 **If you are installing a second memory option, repeat steps 1 to 4, installing it in memory connector 2.**

6 **If you need to install another option on the system board:**

- See “Flash Memory Option” on page 304.
- See “Option Cards” on page 308.

7 **See “Closing the Printer System Board” on page 297 to reattach the shield and side door.**

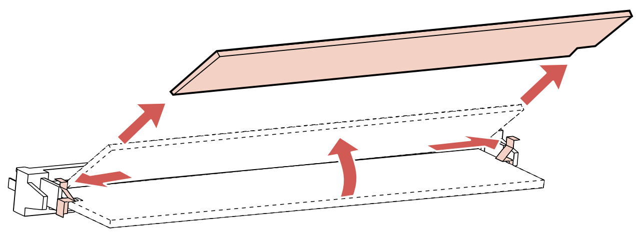
Note: To verify that the option is installed properly, see “Verifying the Installation of Options” on page 325.

Memory and Option Cards

Removing a Memory Option

WARNING: Electronic components are easily damaged by static electricity. Touch something metal before you touch the memory option.

1. **If necessary, follow the steps under "Accessing the Printer System Board" on page 293.**
2. **Locate the memory option you want to remove.**
3. **Push out on the metal clips at each end of the connector and rotate the memory option up to a 45° angle. Pull it out of the connector.**



4. **Place the memory option in its original packaging.** If you did not save the packaging, wrap it in paper and store it in a box.
5. **If you need to install a replacement memory option or other option on the system board:**
   - See "Printer Memory Option" on page 299.
   - See "Flash Memory Option" on page 304.
   - See "Option Cards" on page 308.
6. **See "Closing the Printer System Board" on page 297 to reattach the shield and side door.**

Flash Memory Option

Flash memory is useful for storing information like downloaded fonts, overlays, and macros. Information stored in flash memory is retained when the printer is turned off and can be quickly retrieved by the printer.

You can buy Flash Memory Options with 1MB, 2MB or 4MB of flash memory.

Use MarkVision to download fonts, symbol sets, or macros to flash memory. Refer to the *Technical Reference* for more details about using your flash memory option.

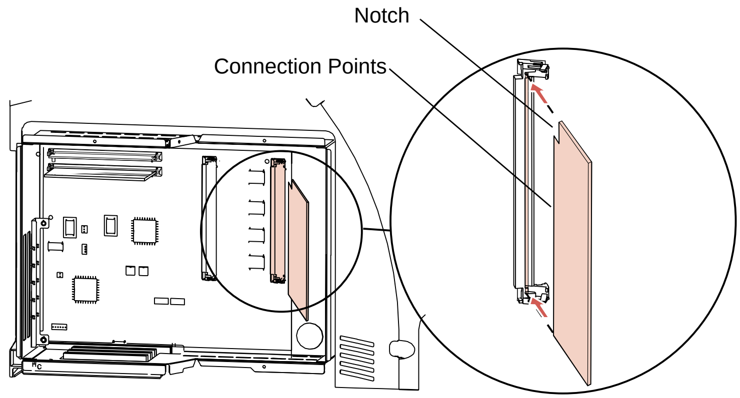
Installing a Flash Memory Option

Before you install the flash memory option, follow the steps under “Accessing the Printer System Board” on page 293. If you need to remove a flash memory option first, see “Removing a Flash Memory Option” on page 307.

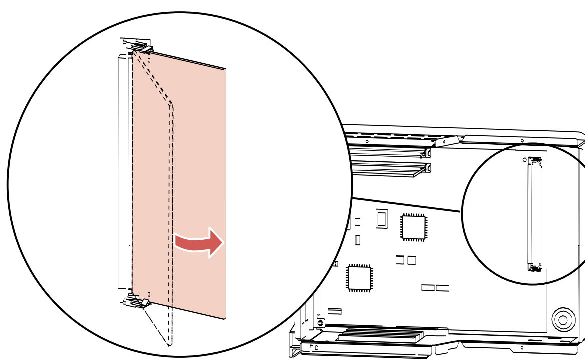
WARNING: Electronic components are easily damaged by static electricity. Touch something metal before you touch the flash memory option.

1 **Unpack the flash memory option.** Avoid touching the connection points along its edge. Save the packaging.

2 **Hold the flash memory option with the connection points pointing toward the system board and the notch toward the top of the printer. Insert it all the way into the connector at a 45° angle.**



3 **Press the flash memory option down toward the system board until it snaps into place. Make sure both metal clips on the connector are fastened and the two pins on the connector are pushed through the holes in the option.**



4 **If you need to install another option on the system board:**

- See “Printer Memory Option” on page 299.
- See “Option Cards” on page 308.

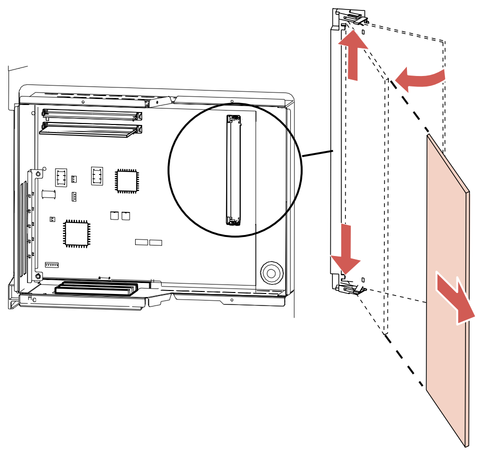
5 **See “Closing the Printer System Board” on page 297 to reattach the shield and side door.**

Note: To verify that the option is installed properly, see “Verifying the Installation of Options” on page 325.

Removing a Flash Memory Option

WARNING: Electronic components are easily damaged by static electricity. Touch something metal before you touch the flash memory option.

1. **If necessary, follow the steps under "Accessing the Printer System Board" on page 293.**
2. **Locate the flash memory option.** See page 296.
3. **Push out on the metal clips at each end of the connector.**
4. **Rotate the flash memory option out to a 45° angle, and gently pull it out of the connector.**



5. **Place the flash memory option in its original packaging.** If you did not save the packaging, wrap it in paper and store it in a box.
6. **If you need to install a replacement flash memory option or other option on the system board:**
   - See "Flash Memory Option" on page 304.
   - See "Printer Memory Option" on page 299.
   - See "Option Cards" on page 308.
7. **See "Closing the Printer System Board" on page 297 to reattach the shield and side door.**

Option Cards

Option cards available for your printer include:

- Internal Network Adapter (INA) option card
- Tri-Port interface option card
- Parallel 1284-C Adapter option card
- Hard Disk with Adapter option card

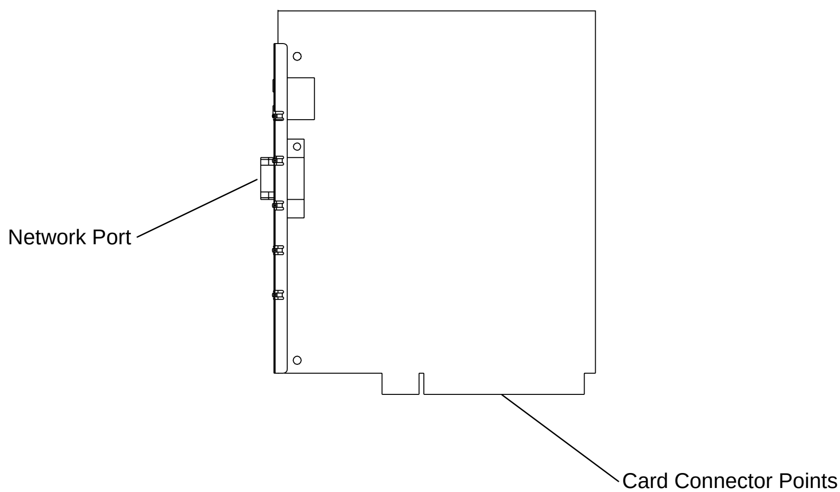
Refer to the documentation that is included with each option card for detailed information about that specific card.

Your printer will accommodate one, two or three option cards, depending on the model. The installation instructions are the same regardless of the type of option card purchased.

Internal Network Adapter (INA) Option Card

The INA option card, sometimes called an internal print server, lets you connect the printer to a local area network (LAN).

INA option cards have a similar size and shape. The network port on the card must correspond to your network.



Installing the INA Option Card

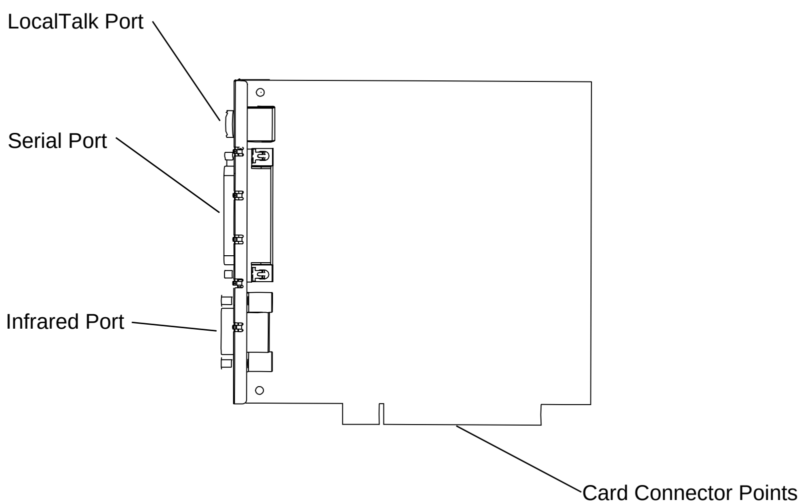
To install, follow the instructions under "Installing an Option Card" starting on page 315.

Tri-Port Interface Option Card

The Tri-Port interface option card lets you connect your printer to:

- LocalTalk network
- Serial (RS-232C or Serial RS-422)
- Infrared adapter

Multiple Tri-Port interface cards can be installed on models with multiple connectors. If you install multiple Tri-Port interface cards, you can use all serial ports, but you can use only one LocalTalk and one Infrared connection per printer. The LocalTalk and Infrared connection installed in the lowest numbered connector is active.



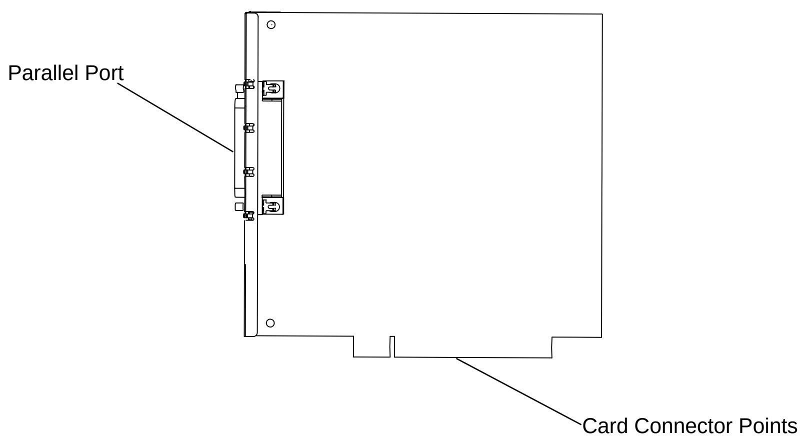
Installing the Tri-Port Interface Option Card

To install, follow the instructions under "Installing an Option Card" starting on page 315.

Parallel 1284-C Adapter Option Card

The Parallel 1284-C Adapter option card lets you connect your printer to a Parallel interface. Use a 1284 A-C cable to connect to your computer. We recommend a Lexmark 3 meter (9.84 ft) cable, part number 43H5171.

Multiple Parallel 1284-C Adapter cards can be installed and used on models with multiple connectors.



Installing the Parallel 1284-C Adapter Option Card

To install, follow the instructions under “Installing an Option Card” starting on page 315.

Hard Disk with Adapter Option Card

Like the flash memory option, the hard disk option is useful for storing information such as downloaded fonts and macros. It can also store incoming print jobs in a buffer until they print.

You can purchase:

- a hard disk with adapter option card
- a hard disk adapter card for installing a separately purchased hard disk

Your printer can have only one hard disk option installed.

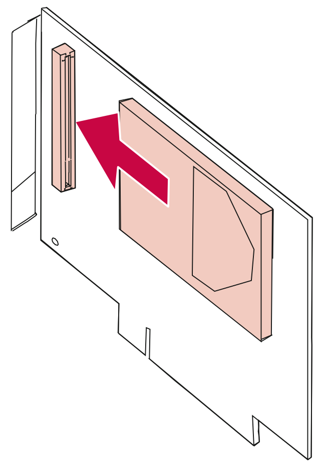
Attaching a Hard Disk to the Adapter Card

Use your adapter card with a hard disk meeting the following criteria:

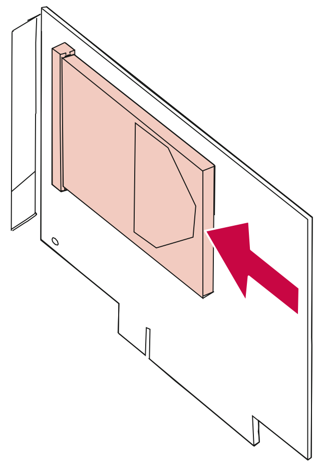
- 2.5-inch platter
- ATA-2 (IDE) interface
- Maximum thickness of 15 mm (.59 in.)

To attach the hard disk to the adapter card:

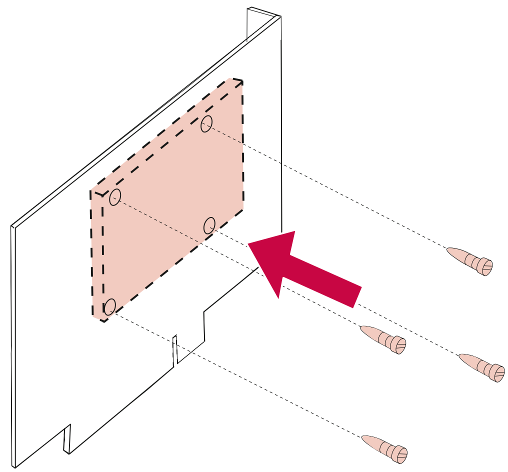
1 **Align the connector pins on the end of the hard disk with the connector on the back of the adapter card.**



2 **Push the hard disk securely into the connector.**



3 **Turn the adapter card over and insert the four screws. Securely tighten each screw.**



Installing the Hard Disk with Adapter Option Card

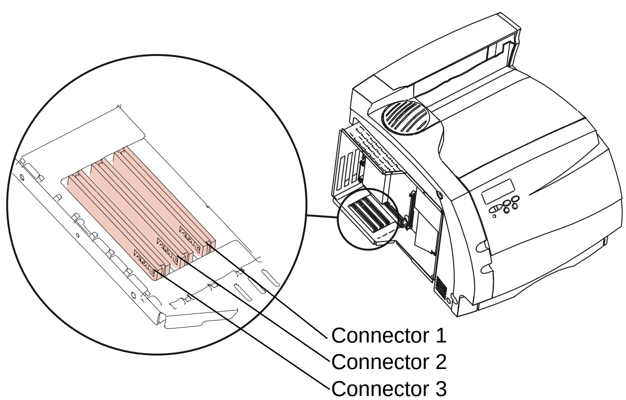
To install, follow the instructions under “Installing an Option Card” starting on page 315.

Installing an Option Card

WARNING: Electronic components are easily damaged by static electricity. Touch something metal before you touch the card.

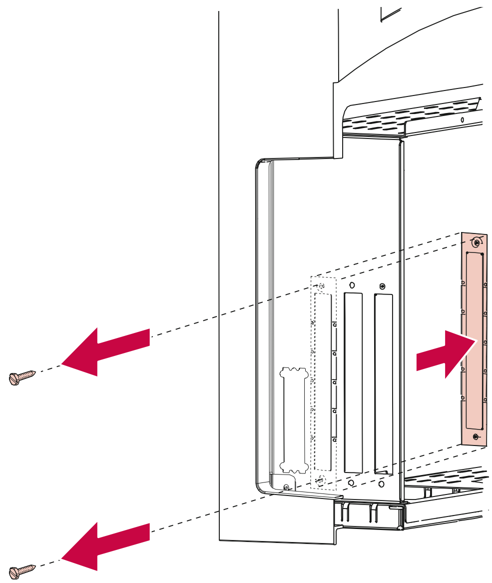
Before you install the option card, follow the steps under "Accessing the Printer System Board" on page 293. If you need to remove an option card, see "Removing an Option Card" on page 319.

1 **Locate the option card connectors on the system board.** If you are installing only one card, install it in connector 1. If you are installing multiple cards on a model with multiple connectors, use connector 1 first, connector 2 second, and connector 3 last.



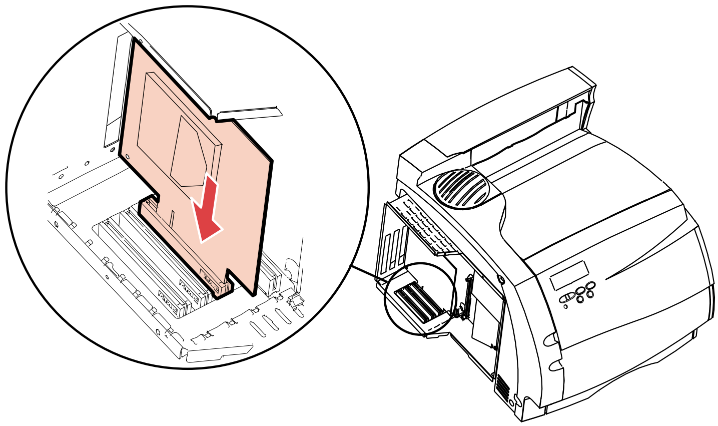
2 **Locate the two screws on the back of the printer that attach the metal plate to the slot.**

3 **Remove and save the two screws. Remove and discard the plate.**



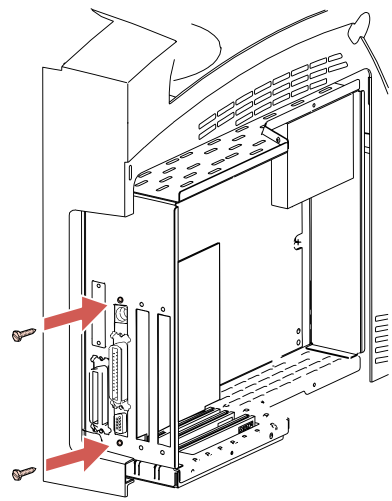
4 **Unpack the option card.** Save the packing materials.

5 **Align the connector on the card with the option connector on the system board.**



6 **Push in the card firmly until it is completely inserted into the system board connector.** The two connectors should fit snugly together.

7 **Insert the two screws saved from the metal plate (or the extra screws shipped with the option card) through the holes over and under the slot. Gently tighten the screws to secure the card.**



8 **If you need to install another option card or another option on the system board:**

- See “Option Cards” on page 308.
- See “Printer Memory Option” on page 299.
- See “Flash Memory Option” on page 304.

9 **See “Closing the Printer System Board” on page 297 to reattach the shield and side door.**

Note: To verify that the option is installed properly, see “Verifying the Installation of Options” on page 325.

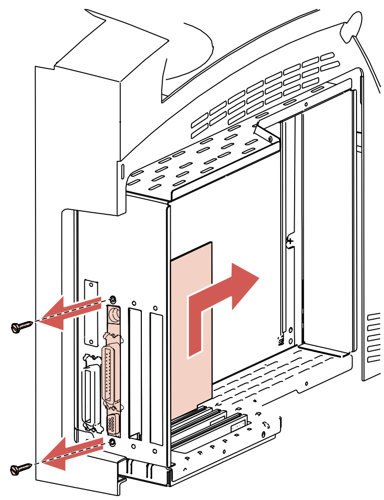
Removing an Option Card

WARNING: Electronic components are easily damaged by static electricity. Touch something metal before you touch the card.

1 **If necessary, follow the steps under “Accessing the Printer System Board” starting on page 293.**

2 **Locate the option you want to remove. See page 296.**

3 **Loosen and remove the two screws over and under the slot. Gently pull the card out of the connector on the system board.**



4 **Place the option card in its original packaging.** If you did not save the packaging, wrap the card in paper and store it in a box.

5 **If you need to install a replacement card or another option on the system board:**

- See “Option Cards” on page 308.
- See “Printer Memory Option” on page 299.
- See “Flash Memory Option” on page 304.

6 **See “Closing the Printer System Board” on page 297 to reattach the shield and side door.**

Infrared Adapter

Chapter 17

An infrared adapter is available for your printer to let you print remotely from a computer equipped with an infrared port.

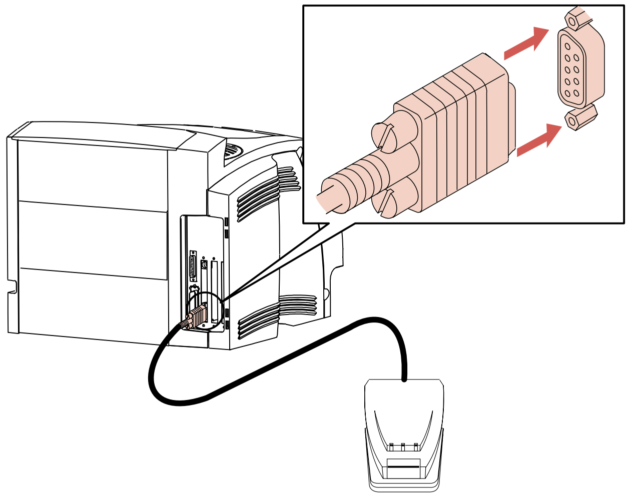
The Tri-Port interface option card, which includes an infrared port, is also available for your printer to let you connect the infrared adapter to your printer. For more information see “Tri-Port Interface Option Card” on page 310.

Connecting the Cable and Using the Infrared Adapter

To connect the infrared adapter to your printer:

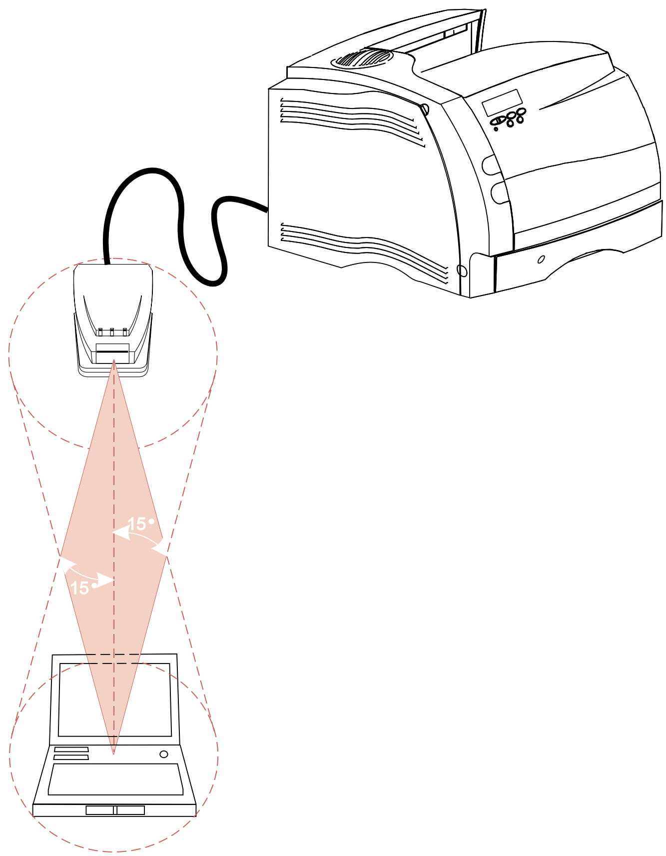
1. **Locate the infrared port on the optional Tri-Port interface card installed in your printer.** If you need to install the Tri-Port interface option card, see “Installing an Option Card” on page 315.

2 **Plug the cable into the infrared port.** The adapter has been plugged into the port correctly if any light on the infrared adapter comes on when the printer is on.



3 **Aim the computer infrared port at the infrared port on the front of the infrared adapter.** Refer to the documentation that came with your computer for information about your computer infrared port.

4 **Draw an imaginary line between the two infrared ports. Aim the infrared port on your computer within 15 degrees of either side of this line as shown.**



5 **Send a job to print.** If the job does not print correctly, see page 206.

Verifying the Installation of Options

Chapter 13

Once an option is installed, verify that it is installed properly by printing a menu settings page.

A menu settings page lists:

- all the printer settings contained in the operator panel menus and their default values
- all installed features and options, such as, internal network adapter (INA) cards, drawers, output expanders, duplex, flash, and hard disk
- other printer settings

To print a menu settings page:

1. **Make sure the printer power is On (|) and the Ready status message appears on the display.**
2. **Press Menu> or <Menu to enter the menus.**
3. **Continue to press and release Menu> until you see TESTS MENU.**
4. **Press Select to show the list of menu items for the TESTS MENU.**

   Continue to press and release **Menu>** until you see **Print Menus** on the second line.
5. **Press Select to select Print Menus.** The message **Printing Menu Settings** is displayed.

   The menu settings page prints.

Look for the option name on the printed page. If the option does not appear on the page, it is not installed securely in place or aligned properly. Remove the option and install it again. Print the menu settings page again.

Appendixes

Understanding Fonts

Appendix A

This appendix contains basic information about fonts, their characteristics, and the specific fonts available in PCL emulation, and PostScript Level 2 emulation.

Note: PCL emulation refers to printer emulation when it is responding to either PCL 5 or PCL 6 data stream commands. Differences in the way fonts are handled when in PCL 5 emulation or PCL 6 emulation are noted in this appendix.

Typefaces and Fonts

A *font* is a set of characters and symbols created with a distinct design. The distinct design is called a *typeface*. The typefaces you select add personality to a document. Well chosen typefaces make a document easier to read.

The printer has numerous resident fonts in PCL emulation and PostScript Level 2 emulation. See “Resident Fonts” on page 334 for a listing of all resident fonts.

Weight and Style

Typefaces are often available in different weights and styles. These variations modify the original typeface so you can, for example, emphasize important words in text or highlight book titles. The different weights and styles are designed to complement the original typeface.

Weight refers to the thickness of the lines that form the characters. Thicker lines result in darker characters. Some words commonly used to describe the weight of a typeface are bold, medium, light, black, and heavy.

Style refers to other typeface modifications, such as tilt or character width. Italic and oblique are styles where the characters are tilted. Narrow, condensed, and extended are three common styles that modify the character widths.

Some fonts combine several weight and style modifications; for example Helvetica Narrow Bold Italic. A group of several weight and style variations of a single typeface is called a *typeface family*. Most typeface families have four variations: regular, italic, bold, and bold italic. Some families have more variations, as the following illustration for the Helvetica typeface family shows:

Helvetica	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Helvetica Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Helvetica-Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Helvetica-BoldItalic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Helvetica-Narrow	ABCDEFGHIJKLMNOPQRSTUWXTYZ
Helvetica-Narrow Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Helvetica-Narrow Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Helvetica-Narrow-BoldItalic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***

Pitch and Point Size

The size of a font is specified as either a pitch or point size, depending on whether the font is fixed space or proportional.

In *fixed space* fonts, each character has the same width. *Pitch* is used to specify the size of fixed space fonts. It is a measure of the number of characters that will print in one horizontal inch of type. For example, all 10-pitch fonts print 10 characters per inch (cpi) and all 12-pitch fonts print 12 cpi:

Courier	10 Pitch	1234567890
Courier-Bold	**10 Pitch**	**1234567890**
Courier	12 Pitch	123456789012
Courier-Bold	**12 Pitch**	**123456789012**

1 inch

In *proportional* (or *typographic*) fonts, every character can have a different width. Since proportional fonts have characters with different widths, the font size is specified in point size, not pitch. *Point size* refers to the height of the characters in the font. A *point* is defined as 1/72 inch. The characters in a font printed at 24 point will be twice as large as the characters in the same font printed at 12 point. The following illustration shows samples of a font printed in different point sizes:

48 point 36 point

24 point 18 point 12 point 10 point

The point size of a font is defined as the distance from the top of the tallest character in the font to the bottom of the lowest character in the font. Due to the definition of point size, different fonts printed at the same point size may appear quite different in size. This is because there are other font parameters that affect how the font looks. However, the point size of a font is an excellent specification of the relative size of a font. The following examples illustrate two very different proportional fonts at 18 point:

ITC Avant Garde   abcdefghABCDEFGH

ITC Zapf Chancery   abcdefghABCDEFGH

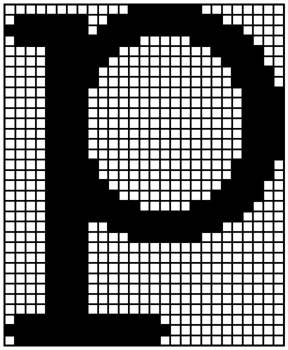
Symbol Sets

A *symbol set* is the collection of alphabetic and numeric characters, punctuation, and special characters available in the font you select. Symbol sets support the requirements for different languages or specific applications, such as math symbols used for scientific text.

In PCL emulation, a symbol set also defines which character will print for each key on the keyboard (or more specifically, for each *code point*). Some applications require different characters at some code points. To support multiple applications and languages, all printer models have 78 symbol sets in PCL emulation.

Bitmapped and Scalable Fonts

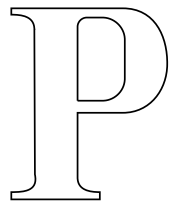
The printer uses both bitmapped and scalable fonts. Bitmapped fonts are stored in printer memory as predefined patterns of bits that represent a typeface at a specific size, style and resolution. An example of a character from a bitmapped font is shown below:



Bitmapped fonts are available in different type styles and point sizes as downloadable fonts. Contact the place where you bought your printer for more information about downloadable fonts.

Scalable fonts (also called *outline* fonts) are stored as computer programs that define the outlines of the characters in the font. Each time you print characters from a scalable font, the printer creates a bitmap of the characters at the point size you choose and saves it

temporarily in printer memory. These temporary bitmapped fonts are deleted when you turn off or reset the printer. Scalable fonts provide the flexibility of printing in many different point sizes.





Your printer uses different scalable font formats for downloading fonts to the printer. PCL 5 emulation uses *Intellifont* and *TrueType* scalable fonts. PCL 6 emulation uses *TrueType* scalable fonts only. PostScript Level 2 emulation uses *Type 1* and *TrueType* scalable fonts. There are thousands of different scalable fonts available in these different font formats from numerous font suppliers.

If you plan to use many downloadable bitmapped or scalable fonts or if you plan to use many different sizes of scalable fonts, you may need to purchase additional memory for your printer. See “Printer Memory Option” on page 299 for more information.

Resident Fonts

Your printer comes equipped with resident fonts stored permanently in printer memory. There are 75 scalable fonts in PCL 5, PCL 6 and PostScript Level 2 emulation. In addition, PCL 5 has two bitmapped fonts.

Scalable Fonts

You can select the following resident scalable fonts from the printer operator panel or from your software application.

The following fonts are available for all printer models in the following printer languages: PCL 5 emulation, PCL 6 emulation, and PostScript Level 2 emulation. See “Printing a Font Sample List” on page 339 for more information.

The font names shown below are for PCL 5 emulation. In PCL 6 emulation and PostScript Level 2 emulation, some of the font names will be slightly different for technical reasons.

Albertus Medium
Albertus Extra Bold
Antique Olive
Antique Olive Italic
Antique Olive Bold
Arial
Arial Italic
Arial Bold
Arial Bold Italic
Century Schoolbook Roman
Century Schoolbook Italic
Century Schoolbook Bold
Century Schoolbook Bold Italic
CG Omega
CG Omega Italic
CG Omega Bold
CG Omega Bold Italic
CG Times
CG Times Italic
CG Times Bold
CG Times Bold Italic
Clarendon Condensed Bold
Coronet
Courier
Courier Italic
Courier Bold
Garamond Kursiv
Garamond Halbfett
Garamond Kursiv Halbfett
Helvetica
Helvetica Italic
Helvetica Bold
Helvetica Bold Italic
Helvetica Narrow
Helvetica Narrow Italic
Helvetica Narrow Bold
Helvetica Narrow Bold Italic
Helvetica Light
Helvetica Light Oblique
Helvetica Black
Helvetica Black Oblique
ITC Avant Garde Book
ITC Avant Garde Book Oblique
ITC Avant Garde Demi
ITC Avant Garde Demi Oblique
ITC Bookman Light
ITC Bookman Light Italic
ITC Bookman Demi
ITC Bookman Demi Italic
ITC Zapf Chancery Medium Italic
ITC Zapf Dingbats
Letter Gothic

Courier Bold Italic
Garamond Antiqua
Marigold
Palatino Roman
Palatino Italic
Palatino Bold
Palatino Bold Italic
Symbol
Times New Roman
Times New Roman Italic
Times New Roman Bold
Times New Roman Bold Italic
Letter Gothic Italic
Letter Gothic Bold
Univers Medium
Univers Medium Italic
Univers Bold
Univers Bold Italic
Univers Condensed Medium
Univers Condensed Medium Italic
Univers Condensed Bold
Univers Condensed Bold Italic
Wingdings

Bitmapped Fonts

Font Name	PCL 5 Emulation	PCL 6 Emulation	PostScript Level 2 Emulation
Line Printer 16	All	All	None
POSTNET Barcode	All	None	None

Symbol Sets for PCL Emulation

ABICOMP International
ABICOMP Brazil / Portugal
DeskTop
Greek-8
HP German
HP Spanish
ISO-2 IRV
ISO-4 UK
ISO-6 ASCII
ISO-10 Swedish / Finnish
ISO-11 Swedish
ISO-14 JIS ASCII
ISO-15 Italian
ISO-16 Portuguese
ISO-17 Spanish
ISO-21 German
ISO-25 French
ISO-57 Chinese
ISO-60 Norwegian
ISO-61 Norwegian v2
ISO-69 French
ISO-84 Portuguese
ISO-85 Spanish
ISO 8859-1 Latin 1
ISO 8859-2 Latin 2
ISO 8859 / 5 Latin / Cyrillic
ISO 8859 / 7 Latin / Greek
ISO 8859-9 Latin 5
ISO 8859-10 Latin 6
Legal
PS Text
Roman-8
Math-8
MC Text
Microsoft Publishing
PC-8 Bulgarian
PC-8 Code Page 437
PC-8 Danish / Norwegian
PC-8 Greek
PC-8 Greek Alternate Code Page 437
PC-8 PC NOVA
PC-8 Polish Mazovia
PC-775 Code Page 775
PC-850 Multilingual
PC-851 Latin / Greek Code Page 851
PC-852 Latin 2
PC-853 Turkish / Latin 3
PC-855 Cyrillic Code Page 855
PC-857 Turkish Code Page 857
PC-860 Portugal Code Page 860

PC-861 Cyrillic Code Page 861	Turkish-8
PC-863 Canadian French Code Page 863	USSR-GOST
PC-865 Nortic Code Page 865	Ventura International
PC-869 Latin / Greek Code Page 869	Ventura Math
PC-911 Katakana	Ventura US
PC-1004 OS / 2 Code Page 1004	Ventura Zapf Dingbats
PC Cyrillic	Windows 3.0 Latin 1
PC-Turkish	Windows 3.1 Baltic
PC-Ukrainian	Windows 3.1 Latin 1
Pi Font	Windows 3.1 Latin 2
POSTNET Barcode	Windows 3.1 Latin 5
PS ITC Zapf Dingbats	Windows Latin / Cyrillic
PS Math	Windows Latin / Greek
Symbol	Wingdings

Note: Not all font names support all of the symbol sets. Refer to the *Technical Reference* or use your printer operator panel to find which symbols sets are supported by each font name.

Downloadable Fonts

You can download scalable fonts in PostScript Level 2 emulation and either scalable or bitmapped fonts in PCL emulation. Fonts can be downloaded to printer memory or to a Flash Memory Option or Hard Disk with Adapter Option. Fonts downloaded to flash memory or hard disk remain in memory even after the printer language changes, the printer resets, or the printer is turned off.

The MarkVision utility includes a remote management function that lets you manipulate the font files you've downloaded to flash memory or hard disk.

Printing a Font Sample List

To print a list of the fonts currently available, select **TESTS MENU**, **Print Fonts,** and either **PCL Fonts**, **PS 2 Fonts** or **PPDS Fonts** from the printer operator panel.

Enhancing Print Quality

Appendix B

There are several ways to customize the printer settings to meet your specific print quality needs. Enhanced print quality sometimes comes at a cost, such as increased print time or additional memory requirements. There may be times when you prefer to choose printer settings that don’t place as great a demand on the printer resources.

This information may help you make decisions about your network default settings, or help you determine the best print quality settings for a particular job. For information about solving print quality problems, see “Print Quality Problems” on page 201.

Definitions

Before talking about print quality, it is important to establish the terms used to define certain aspects of the printing process. For the purposes of the discussion in this chapter, we offer the following definitions:

Pixel

The smallest graphic unit that can be addressed by the printer, usually a single dot; also called a *picture element* or *pel***.**

Binary

The ability to turn a pixel on or off, as opposed to assigning it a range of intensities; single-color printers (monochrome printers) are binary.

Continuous Tone

The ability to represent many levels of intensity for a single pixel, as opposed to simply turning the pixel on or off.

Resolution

The spacing of pixels the printer can address and resolve individually, usually measured in the number of dots per inch (dpi).

Text

Alphabetic and numeric characters and symbols.

Graphics

Any of a variety of pictorial representations, including basic line art, charts, and graphs, usually electronically generated from a software application.

Images

Visual data typically scanned from original sources external to the PC, such as photographs or video frames.

Gray Scales

Graphics or images consisting of gray dots representing a range of intensities, as opposed to black only dots; gray scale objects must be converted to halftones before they can be printed on a binary printer.

Halftones

Gray-scale objects (such as photographs) whose gray dots have been converted to a pattern of groups of black dots. These groups, which are of various sizes, along with the white dots (pixels turned off), create the illusion of gray shadings: larger groups make the image appear black or dark gray, while smaller groups make the image appear light gray.

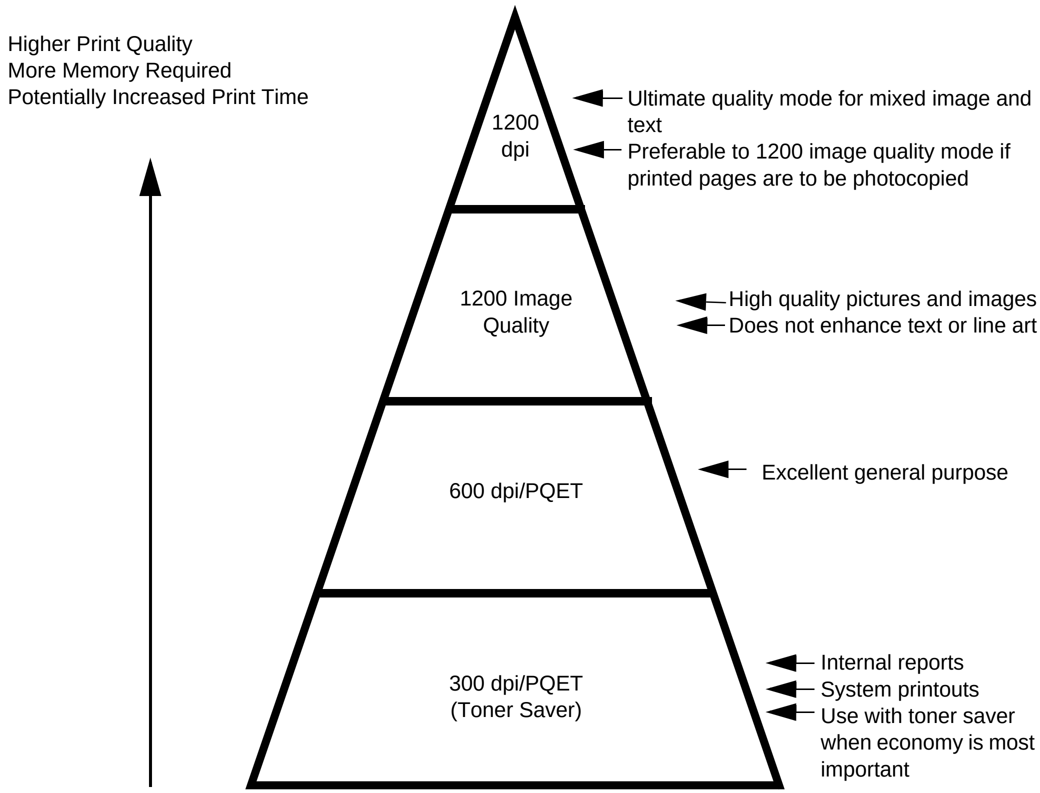
Screen Frequency

The distance between the centers of the groups of black dots, measured in lines per inch (lpi); although the group size varies in a halftone image, the screen frequency remains constant.

Print Quality Overview

Use the following diagram as an easy guide to help you select the optimum print quality for your application.

PRINT QUALITY



Print Quality Settings

Several factors control the appearance of the printed page. You can regulate how much toner the printer applies to each black dot, or pixel, as well as the frequency and size of the dots.

Each of the following sections describes a printer setting you can change to alter the appearance of the printed document. Note that some of these settings complement each other, while others are mutually exclusive. See the table on page 347 for a summary.

Print Resolution

The Print Resolution setting defines the number of dots printed per inch (dpi). Usually, the higher the setting, the sharper the clarity of printed characters and graphics. Higher settings may require more printer memory and increase the time it takes to print a document.

Not all of the print quality settings are valid for all resolutions.

1200 Image Quality

If you select 1200 Image Quality, the printer varies the size of each printed pixel, thereby producing a continuous tone effect. This improves the print quality of graphic fills and images and half-tones.

1200 Image Quality may require additional printer memory and may slow print time.

If your printer driver does not provide 1200 Image Quality under the Print Resolution menu, select 600 dpi and select 1200 Image Quality under the Options or Features menus.

If Toner Saver is On, the setting for 1200 Image Quality is ignored.

When printing 1200 Image Quality, the printer ignores the settings for PQET.

Print Darkness

Use the Print Darkness setting to darken or lighten all printed elements in your documents. Changing the Print Darkness setting actually increases or decreases the amount of toner used to print each pixel.

The factory default setting (Normal) should satisfy most of your printing requirements, particularly for basic text printing. If you want finer line width, higher definition graphics, or a wider range

of grays, select a lighter Print Darkness setting (Lighter or Lightest). Select a darker setting (Darker or Darkest) for bolder text and darker gray scales.

You can change the Print Darkness setting for all resolutions.

Toner Saver

Toner Saver preserves the toner supply by reducing the amount of toner on the printed page. This may help lower the cost of printing. Toner Saver is recommended when printing rough drafts, since print quality is reduced. Setting Print Darkness to a lighter setting, with Toner Saver Off, is another way to conserve toner.

When Toner Saver is on at 300 dpi and 600 dpi resolutions, there are five independent levels of Toner Saver available by changing the Print Darkness setting. Choose a darker setting for higher quality, or a lighter setting for higher toner savings.

When Toner Saver is On, the setting for 1200 Image Quality is ignored.

When Toner Saver is on at 1200 dpi resolution, one level of Toner Saver is available. When both Toner Saver and 1200 dpi are selected, the setting for Print Darkness is ignored.

PQET

At lower resolutions, printed characters can appear to have jagged or uneven edges. Print Quality Enhancement Technology (PQET) smooths the edges of printed characters to improve the appearance of the text. It may also improve the smoothness of diagonal lines in basic line art.

While setting PQET On improves the print quality of text, it may adversely affect the appearance of some scanned images or halftones. If you notice reduced print quality with those images, turn PQET Off.

PQET is available for both 300 dpi and 600 dpi resolutions. PQET offers the most benefit at 300 dpi.

When printing in 1200 Image Quality or 1200 dpi, the setting for PQET is ignored.

PictureGrade

In PostScript Level 2 emulation, you can set PictureGrade On to improve the print quality of halftone images. PictureGrade allows a higher effective screen frequency while maintaining a large number of gray intensities.

Set PictureGrade On when printing a detailed graphic or image. Set PictureGrade Off if photocopies of printed pages are too dark.

Summary

Compatibility of Print Quality Settings

Print Quality Setting	Purpose	Print Resolution			
		300 dpi	600 dpi	1200 Image Quality	1200 dpi
Print Darkness	Modify darkness of all printed elements (text, graphics and images)	x	x	x	x
Toner Saver[1]	Conserve toner	x	x		x
PQET[2]	Improve text clarity	x	x		
PictureGrade[3]	Improve quality of images and halftones	x	x	x	

[1] Setting Toner Saver on overrides settings for 1200 Image Quality. When both Toner Saver and 1200 dpi are selected, the setting for Print Darkness is ignored.

[2] When 1200 Image Quality or 1200 dpi is selected, the setting for PQET is ignored.

[3] Available for PostScript Level 2 emulation only.

Printer Specifications

Appendix C

Dimensions

	Optra S 1255 and Optra S 1625	Optra S 1855	Optra S 2455
Height	13.2 in. (335 mm)	13.2 in. (335 mm)	25.6 in. (650 mm)
Width	15.9 in. (405 mm)	16.7 in. (425 mm)	17.5 in (445 mm)
Depth	19.5 in. (495 mm)	19.5 in. (495 mm)	20.5 in. (520 mm)
Weight[1]	41 lb (18.6 kg)	42 lb (19.1 kg)	58 lb (26.4 kg)
Footprint	17.8 in. x 15.9 in. (451 mm x 405 mm)	17.8 in. x 16.7 in. (451 mm x 425 mm)	19.0 in. x 17.5 in. (482 mm x 445 mm)
[1]Weight of printer includes toner cartridge.			

Duty Cycle

Feature	Optra S 1255	Optra S 1625	Optra S 1855	Optra S 2455
Duty cycle	Up to 35,000 pages per month	Up to 65,000 pages per month	Up to 65,000 pages per month	Up to 100,000 pages per month

Supplies

Supply	Description
Toner cartridges	7.5K and 17.6K (at about 5% coverage) replacement toner cartridges.
Charge roll kit	User replaceable charge roll kit for improved print quality.
Label fuser cleaner	Recommended for label printing.

Reference

Notices

Electronic Emission Notices

With a Network Card Installed

Federal Communications Commission (FCC) Compliance Information Statement

The Optra S laser printer, Type 4059, has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

The manufacturer is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

Note: To assure compliance with FCC regulations on electromagnetic interference for a Class A computing device, use a properly shielded and grounded cable such as Lexmark part number 1329605. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

Industry Canada Compliance Statement

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité aux normes d’Industrie Canada

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Community (EC) Directives Conformity

This product is in conformity with the protection requirements of EC Council directives 89/336/EEC and 73/23/EEC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits.

A declaration of conformity with the requirements of the Directive has been signed by the Director of Manufacturing and Technical Support, Lexmark International, S.A., Boigny, France.

This product satisfies the Class A limits of EN 55022 and safety requirements of EN 60950.

WARNING: When a network card is installed, this is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take adequate measures.

Japanese VCCI Notice

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Without a Network Card Installed

Federal Communications Commission (FCC) Compliance Information Statement

The Optra S laser printer, Type 4059, has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class B limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your point of purchase or service representative for additional suggestions.

The manufacturer is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

Note: To assure compliance with FCC regulations on electromagnetic interference for a Class B computing device, use a properly shielded and grounded cable such as Lexmark part number 1329605. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

Any questions regarding this compliance information statement should be directed to:

Director of Lab Operations
Lexmark International, Inc.
740 New Circle Road NW
Lexington, KY 40550
(606) 232-3000

Notices

Industry Canada Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité aux normes d’Industrie Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Community (EC) Directives Conformity

This product is in conformity with the protection requirements of EC Council directives 89/336/EEC and 73/23/EEC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits.

A declaration of conformity with the requirements of the Directive has been signed by the Director of Manufacturing and Technical Support, Lexmark International, S.A., Boigny, France.

This product satisfies the Class B limits of EN 55022 and safety requirements of EN 60950.

Japanese VCCI Notice

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

The United Kingdom Telecommunications Act 1984

This apparatus is approved under the approval number NS/G/1234/J/100003 for the indirect connections to the public telecommunications systems in the United Kingdom.

German Acoustics Statement

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296

	1-Meter Average Sound Pressure, dBa			
	Optra S 2455	Optra S 1855	Optra S 1625	Optra S 1255
Printing	51 dBa	48 dBa	48 dBa	46 dBa
Idling	29 dBa	26 dBa	26 dBa	26 dBa

Notices

Energy Star

The EPA ENERGY STAR Computers program is a partnership effort with computer manufacturers to promote the introduction of energy-efficient products and to reduce air pollution caused by power generation.

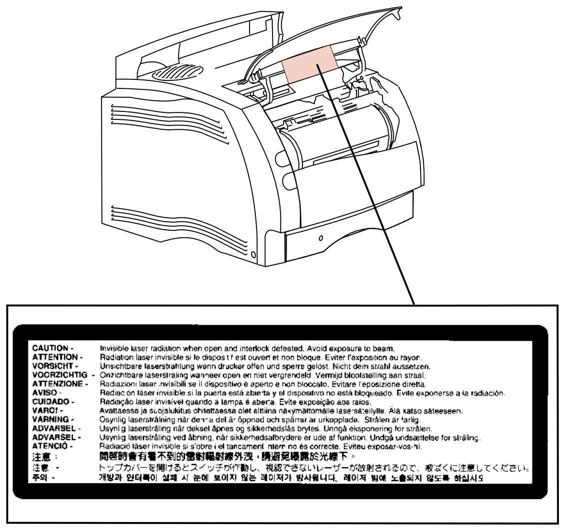
Companies participating in this program introduce personal computers, printers, monitors, or fax machines that power down when they are not being used. This feature will cut the energy used by up to 50 percent. Lexmark is proud to be a participant in this program.

As an Energy Star Partner, Lexmark International, Inc. has determined that this product meets the Energy Star guidelines for energy efficiency.

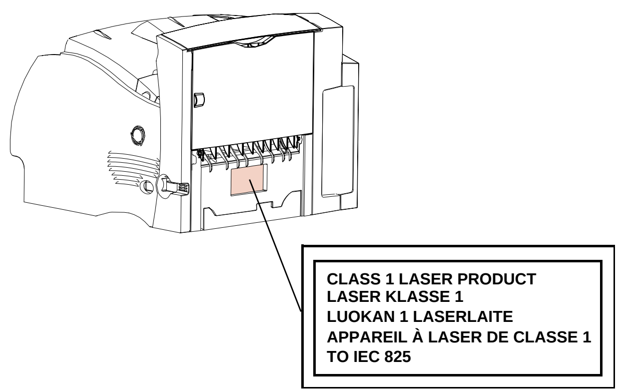
Laser Notices

The following laser notice labels may be affixed to this printer as shown:

Laser Advisory Label



Class 1 Laser Statement Label



Laser Notice

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 825.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIb (3b) laser that is nominally a 5 milliwatt gallium arsenide laser operating in the wavelength region of 770-795 nanometers. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

Laser

Der Drucker erfüllt gemäß amtlicher Bestätigung der USA die Anforderungen der Bestimmung DHHS (Department of Health and Human Services) 21 CFR Teil J für Laserprodukte der Klasse I (1). In anderen Ländern gilt der Drucker als Laserprodukt der Klasse I, der die Anforderungen der IEC (International Electrotechnical Commission) 825 gemäß amtlicher Bestätigung erfüllt.

Laserprodukte der Klasse I gelten als unschädlich. Im Inneren des Druckers befindet sich ein Laser der Klasse IIIb (3b), bei dem es sich um einen Galliumarsenlaser mit 5 Milliwatt handelt, der Wellen der Länge 770-795 Nanometer ausstrahlt. Das Lasersystem und der Drucker sind so konzipiert, daß im Normalbetrieb, bei der Wartung durch den Benutzer oder bei ordnungsgemäßer Wartung durch den Kundendienst Laserbestrahlung, die die Klasse I übersteigen würde, Menschen keinesfalls erreicht.

Avis relatif à l'utilisation de laser

Pour les Etats-Unis : cette imprimante est certifiée conforme aux provisions DHHS 21 CFR alinéa J concernant les produits laser de Classe I (1). Pour les autres pays : cette imprimante répond aux normes IEC 825 relatives aux produits laser de Classe I.

Les produits laser de Classe I sont considérés comme des produits non dangereux. Cette imprimante est équipée d'un laser de Classe IIIb (3b) (arséniure de gallium d'une puissance nominale de 5 milliwatts) émettant sur des longueurs d'onde comprises entre 770 et 795 nanomètres. L'imprimante et son système laser sont conçus pour impossible, dans des conditions normales d'utilisation, d'entretien par l'utilisateur ou de révision, l'exposition à des rayonnements laser supérieurs à des rayonnements de Classe I .

Avvertenze sui prodotti laser

Questa stampante è certificata negli Stati Uniti per essere conforme ai requisiti del DHHS 21 CFR Sottocapitolo J per i prodotti laser di classe 1 ed è certificata negli altri Paesi come prodotto laser di classe 1 conforme ai requisiti della norma CEI 825.

I prodotti laser di classe non sono considerati pericolosi. La stampante contiene al suo interno un laser di classe IIIb (3b) all'arseniuro di gallio della potenza di 5mW che opera sulla lunghezza d'onda compresa tra 770 e 795 nanometri. Il sistema laser e la stampante sono stati progettati in modo tale che le persone a contatto con la stampante, durante il normale funzionamento, le operazioni di servizio o quelle di assistenza tecnica, non ricevano radiazioni laser superiori al livello della classe 1.

Avisos sobre el láser

Se certifica que, en los EE.UU., esta impresora cumple los requisitos para los productos láser de Clase I (1) establecidos en el subcapítulo J de la norma CFR 21 del DHHS (Departamento de Sanidad y Servicios) y, en los demás países, reúne todas las condiciones expuestas en la norma IEC 825 para productos láser de Clase I (1).

Los productos láser de Clase I no se consideran peligrosos. La impresora contiene en su interior un láser de Clase IIIb (3b) de arseniuro de galio de funcionamiento nominal a 5 milivatios en una longitud de onda de 770 a 795 nanómetros. El sistema láser y la impresora están diseñados de forma que ninguna persona pueda verse afectada por ningún tipo de radiación láser superior al nivel de la Clase I durante su uso normal, el mantenimiento realizado por el usuario o cualquier otra situación de servicio técnico.

Declaração sobre Laser

A impressora está certificada nos E.U.A. em conformidade com os requisitos da regulamentação DHHS 21 CFR Subcapítulo J para a Classe I (1) de produtos laser. Em outros locais, está certificada como um produto laser da Classe I, em conformidade com os requisitos da norma IEC 825.

Os produtos laser da Classe I não são considerados perigosos. Internamente, a impressora contém um produto laser da Classe IIIb (3b), designado laser de arseneto de potássio, de 5 milliwatts ,operando numa faixa de comprimento de onda entre 770 e 795 nanómetros. O sistema e a impressora laser foram concebidos de forma a nunca existir qualquer possiblidade de acesso humano a radiação laser superior a um nível de Classe I durante a operação normal, a manutenção feita pelo utilizador ou condições de assistência prescritas.

Laserinformatie

De printer voldoet aan de eisen die gesteld worden aan een laserprodukt van klasse I. Voor de Verenigde Staten zijn deze eisen vastgelegd in DHHS 21 CFR Subchapter J, voor andere landen in IEC 825.

Laserprodukten van klasse I worden niet als ongevaarlijk aangemerkt. De printer is voorzien van een laser van klasse IIIb (3b), dat wil zeggen een gallium arsenide-laser van 5 milliwatt met een golflengte van 770-795 nanometer. Het lasergedeelte en de printer zijn zo ontworpen dat bij normaal gebruik, bij onderhoud of reparatie conform de voorschriften, nooit blootstelling mogelijk is aan laserstraling boven een niveau zoals voorgeschreven is voor klasse 1.

Lasermeddelelse

Printeren er godkendt som et Klasse I-laserprodukt, i overenstemmelse med kravene i IEC 825.

Klasse I-laserprodukter betragtes ikke som farlige. Printeren indeholder internt en Klasse IIIB (3b)-laser, der nominelt er en 5 milliwatt galliumarsenid laser, som arbejder på bølgelængdeområdet 770-795 nanometer. Lasersystemet og printeren er udformet således, at mennesker aldrig udsættes for en laserstråling over Klasse I-niveau ved normal drift, brugervedligeholdelse eller obligatoriske servicebetingelser.

Huomautus laserlaitteesta

Tämä kirjoitin on Yhdysvalloissa luokan I (1) laserlaitteiden DHHS 21 CFR Subchapter J -määrityksen mukainen ja muualla luokan I laserlaitteiden IEC 825 -määrityksen mukainen.

Luokan I laserlaitteiden ei katsota olevan vaarallisia käyttäjälle. Kirjoittimessa on sisäinen luokan IIIb (3b) 5 milliwatin galliumarsenidilaser, joka toimii aaltoalueella 770 - 795 nanometriä. Laserjärjestelmä ja kirjoitin on suunniteltu siten, että käyttäjä ei altistu luokan I määrityksiä voimakkaammalle säteilylle kirjoittimen normaalin toiminnan, käyttäjän tekemien huoltotoimien tai muiden huoltotoimien yhteydessä.

LUOKAN 1 LASERLAITE

VAROITUS! Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

KLASS 1 LASER APPARAT

VARNING! Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

Laser-notis

Denna skrivare är i USA certifierad att motsvara kraven i DHHS 21 CFR, underparagraf J för laserprodukter av Klass I (1). I andra länder uppfyller skrivaren kraven för laserprodukter av Klass I enligt kraven i IEC 825.

Laserprodukter i Klass I anses ej hälsovådliga. Skrivaren har en inbyggd laser av Klass IIIb (3b) som består av en laserenhet av gallium-arsenid på 5 milliwatt som arbetar i våglängdsområdet 770-795 nanometer. Lasersystemet och skrivaren är utformade så att det aldrig finns risk för att någon person utsätts för laserstrålning över Klass I-nivå vid normal användning, underhåll som utförs av användaren eller annan föreskriven serviceåtgärd.

Laser-melding

Skriveren er godkjent i USA etter kravene i DHHS 21 CFR, underkapittel J, for klasse I (1) laserprodukter, og er i andre land godkjent som et Klasse I-laserprodukt i samsvar med kravene i IEC 825.

Klasse I-laserprodukter er ikke å betrakte som farlige. Skriveren inneholder internt en klasse IIIb (3b)-laser, som består av en gallium-arsenlaserenhet som avgir stråling i bølgelengdeområdet 770-795 nanometer. Lasersystemet og skriveren er utformet slik at personer aldri utsettes for laserstråling ut over klasse I-nivå under vanlig bruk, vedlikehold som utføres av brukeren, eller foreskrevne serviceoperasjoner.

Avís sobre el Làser

Segons ha estat certificat als Estats Units, aquesta impressora compleix els requisits de DHHS 21 CFR, apartat J, pels productes làser de classe I (1), i segons ha estat certificat en altres llocs, és un producte làser de classe I que compleix els requisits d'IEC 825.

Els productes làser de classe I no es consideren perillosos. Aquesta impressora conté un làser de classe IIIb (3b) d'arseniür de gal.li, nominalment de 5 mil.liwats, i funciona a la regió de longitud d'ona de 770-795 nanòmetres. El sistema làser i la impressora han sigut concebuts de manera que mai hi hagi exposició a la radiació làser per sobre d'un nivell de classe I durant una operació normal, durant les tasques de manteniment d'usuari ni durant els serveis que satisfacin les condicions prescrites.

Japanese Laser Notice

レーザーに関するお知らせ

このプリンターは、米国ではＤＨＨＳ　２１　ＣＦＲサブチャプターＪのクラスＩ（１）の基準を満たしたレーザー製品であることが証明されています。また米国以外ではＩＥＣ　８２５の基準を満たしたクラスＩのレーザー製品であることが証明されています。

クラスＩのレーザー製品には危険性はないと考えられています。このプリンターはクラスⅢｂ（３ｂ）のレーザーを内蔵しています。このレーザーは、波長が７７０　～　７９５ナノメーターの範囲で、通常５ミリワットのガリウム砒化物を放射するレーザーです。このレーザーシステムとプリンターは、通常の操作、ユーザのメンテナンス、規定された修理においては、人体がクラスＩのレベル以上のレーザー放射に晒されることのないよう設計されています。

Chinese Laser Notice

注意：

本打印机被美国认证合乎 DHHS 21 CFR Subchapter I 对分类 I (1) 激光产品的标准，而在其他地区则被认证合乎 IEC 825 的标准。

分类 I 激光产品一般认为不具危险性，本打印机内部含有分类 IIIb (3b) 的激光，在操作过程中会产生 5 毫瓦含镓及砷的微量激光，其波长范围在 770-795 nm 之间。本激光系统及打印机的设计，在一般操作、使用者维护或规定内的维修情况下，不会使人体接触分类 I 以上等级的辐射。

Korean Laser Notice

본프린터는 1등급 레이저 제품들에 대한 DHHS 21 CFR Subchapter 3의 규정을 준수하고 있음을 미국에서 인증받았으며, 그외의 나라에서도 IEC 825 규정을 준수하는 1등급 레이저 제품으로서 인증을 받았습니다.

1등급 레이저 제품들은 안전한 것으로 간주됩니다. 본 프린터는 5 밀리와트 갤륨 아르세나이드 레이저로서 770-795 나노미터의 파장대에서 활동하는 Class III (3b) 레이저를 내부에 갖고 있습니다. 본 레이저 시스템과 프린터는 정상 작동 중이나 유지 보수 중 또는 규정된 서비스 상태에서 상기의 Class I 수준의 레이저 방출에 사람이 절대 접근할 수 없도록 설계되어 있습니다.

Safety

Safety Information

- If your product is NOT marked with this symbol ⧈, it MUST be connected to an electrical outlet that is properly grounded.
- The power cord must be connected to an electrical outlet that is near the product and easily accessible.
- Refer service or repairs, other than those described in the operating instructions, to a professional service person.
- This product is designed, tested and approved to meet strict global safety standards with the use of specific Lexmark components. The safety features of some parts may not always be obvious. Lexmark is not responsible for the use of other replacement parts.
- Your product uses a laser, exercise
  CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- Your product uses a printing process that heats the print media, and the heat may cause the media to release emissions. You must understand the section in your operating instructions that discusses the guidelines for selecting print media to avoid the possibility of harmful emissions.

Consignes de sécurité

- Si le symbole ⧈ n'apparaît PAS sur votre produit, ce dernier DOIT être branché sur une prise de courant mise à la terre.
- Le câble d'alimentation doit être connecté à une prise de courant placée près du produit et facilement accessible.
- L'entretien et les réparations autres que ceux décrits dans les instructions d'emploi doivent être effectués par le personnel de maintenance qualifié.
- Ce produit a été conçu, testé et approuvé pour respecter les normes strictes de sécurité globale lors de l'utilisation de composants Lexmark spécifiques. Les caractéristiques de sécurité de certains éléments ne sont pas toujours évidentes. Lexmark ne peut être tenu responsable de l'utilisation d'autres pièces de rechange.
- Le produit utilise un laser :
  ATTENTION : Les commandes, les réglages et l'exécution de toute autre

procédure que celle indiquée dans le présent document peuvent entraîner des risques de radiations.

- Le produit utilise un système d'impression qui chauffe le support d'impression duquel peuvent alors se dégager des émissions. Vous devez consulter les directives générales dans la section appropriée des instructions d'emploi pour savoir comment empêcher que ces émissions ne se produisent.

Norme di sicurezza

- Se il prodotto NON è contrassegnato con questo simbolo ⧈ DEVE essere collegato lo stesso ad una presa elettrica con messa a terra.
- Il cavo di alimentazione deve essere collegato ad una presa elettrica posta nelle vicinanze del prodotto e facilmente raggiungibile.
- Per la manutenzione o le riparazioni, escluse quelle descritte nelle istruzioni operative, consultare il personale di assistenza autorizzato.
- Il prodotto è stato progettato, testato e approvato in conformità a severi standard di sicurezza e per l'utilizzo con componenti Lexmark specifici. Le caratteristiche di sicurezza di alcune parti non sempre sono di immediata comprensione. Lexmark non è responsabile per l'utilizzo di parti di ricambio di altri produttori.
- Poiché il prodotto in questione utilizza il laser, considerare il seguente avvertimento:
  ATTENZIONE: L'uso di dispositivi di controllo o di regolazione, o l'esecuzione di procedure non incluse tra quelle descritte in questa documentazione, può provocare una pericolosa esposizione alle radiazioni.
- Il prodotto in questione utilizza un processo di stampa che riscalda i supporti di stampa; il calore generato può determinare l'emissione di sostanze dannose da parte dei supporti. Leggere attentamente la sezione riportata nelle istruzioni riguardante le operazioni di selezione dei supporti di stampa in modo da evitare la possibilità di emissioni dannose.

Sicherheitshinweise

- Falls der Drucker nicht mit diesem Symbol ⧈ markiert ist, muß er an eine ordnungsgemäß geerdete Steckdose angeschlossen werden.
- Das Netzkabel muß an eine Steckdose angeschlossen werden, die sich in der Nähe des Geräts befindet und leicht zugänglich ist.
- Wartungsarbeiten und Reparaturen, mit Ausnahme der in der Betriebsanleitung näher beschriebenen, sollten Fachleuten überlassen werden.
- Dieses Produkt und die zugehörigen Komponenten wurden entworfen und getestet, um beim Einsatz die weltweit gültigen Sicherheitsanforderungen zu erfüllen. Die sicherheitsrelevanten Funktionen der Bauteile und Optionen sind nicht immer offensichtlich. Sofern Teile eingesetzt werden, die nicht von Lexmark sind, wird von Lexmark keinerlei Verantwortung oder Haftung für dieses Produkt übernommen.
- Dieses Produkt verwendet einen Laser. Wenden Sie daher besondere
  VORSICHT an: Die Verwendung von Kontrollen bzw. die Regulierung von

Vorgängen mit Ausnahme derjenigen, die in dieser Betriebsanleitung behandelt werden, kann Sie gefährlicher Bestrahlung aussetzen.

- Dieses Produkt verwendet ein Druckverfahren, bei dem das Druckmedium erhitzt wird. Diese Erwärmung kann zu einer Freigabe von Emissionen des Druckmediums führen. Es ist daher wichtig, daß Sie in der Betriebsanleitung den Abschnitt, der sich mit der Auswahl geeigneter Druckmedien befaßt, sorgfältig durchlesen und die dort aufgeführten Richtlinien befolgen, um der Gefahr schädlicher Emissionen vorzubeugen.

Pautas de Seguridad

- Si su producto NO tiene este símbolo, ⧈ , es IMPRESCINDIBLE conectarlo a una toma de corriente eléctrica con toma de tierra correcta.
- El cable de alimentación deberá conectarse a una toma de corriente situada cerca del producto y de fácil acceso.
- Cualquier servicio o reparación deberá realizarse por parte del personal cualificado, a menos que se trate de las averías descritas en las instrucciones de utilización.
- Este producto se ha diseñado, verificado y aprobado para cumplir los más estrictos estándares de seguridad global usando los componentes específicos de Lexmark. Puede que las características de seguridad de algunas piezas no sean siempre evidentes. Lexmark no se hace responsable del uso de otras piezas de recambio.
- El producto utiliza un láser. Actúe con
  PRECAUCION: El uso de los controles o ajustes o el llevar a cabo procedimientos distintos a los especificados aquí puede causar niveles de radiación peligrosos.
- Durante el proceso de impresión que utiliza este producto se calienta el medio de impresión, y el calor puede provocar que el medio emita gases. Para evitar emisiones peligrosas, el usuario deberá comprender y seguir lo expuesto en la sección de las instrucciones de utilización donde se describen las directrices para seleccionar el medio de impresión.

Veiligheidsvoorschriften

- Zorg ervoor dat uw produkt is aangesloten op een geaard stopcontact als het produkt NIET is gemarkeerd met det symbool ⧈.
- Het netsnoer moet worden aangesloten op een gemakkelijk bereikbaar stopcontact in de buurt van het produkt.
- Neem contact op met een professionele onderhoudstechnicus voor onderhoud en reparaties die niet in de bij het produkt geleverde instructies beschreven worden.
- Dit product is ontworpen, getest en goedgekeurd om te voldoen aan strenge internationale veiligheidsvoorschriften. Deveiligheidsvoorzieningen van bepaalde onderdelen zullen niet altijd duidelijk zichtbaar zijn. Lexmark is niet verantwoordelijk voor het gebruik van andere vervangende onderdelen.
- Uw produkt maakt gebruik van een laser, wees
  VOORZICHTIG: Instellen van het controlepaneel of, aanpassingen of uitvoering

van procedures op andere wijze dan hier is gespecificeerd kunnen leiden tot blootstelling aan gevaarlijke straling.

- Uw produkt gebruikt een afdrukproces waarbij het afdrukmateriaal verhit raakt. Hierdoor kan straling vrijkomen. Lees het gedeelte in de bij het produkt geleverde instructies, waarin richtlijnen voor de keuze van afdrukmateriaal worden beschreven, zorgvuldig door, zodat u mogelijke schadelijke straling kunt voorkomen.

Sikkerhedsoplysninger

- Hvis dit produkt IKKE er markeret med dette symbol ⧈ , SKAL det sluttes til en stikkontakt med jordforbindelse.
- Ledningen skal sluttes til en stikkontakt, der er tæt på produktet og som er let tilgængelig.
- Service og reparationer, som ikke er beskrevet i brugsanvisningen, skal udføres af en kvalificeret tekniker.
- Dette produkt er udviklet, testet og godkendt i overensstemmelse med Lexmarks verdensomspændende standarder for sikkerhed. Delenes sikkerhedsfunktioner kan være skjulte. Lexmark påtager sig intet ansvar for brugen af uoriginale reservedele.
- Dit produkt bruger en laser og du skal være
  FORSIGTIG: Brug af styremekanismer, indstillinger eller fremgangsmåder, som ikke er beskrevet her, kan resultere i farlig radioaktiv bestråling.
- Produktet benytter en udskrivningsproces, der opvarmer skrivemediet og denne varme kan føre til at udskriftmedier afgiver dampe. Det er vigtigt at du forstår den del af brugsanvisningen, der omhandler valg af udskriftsmedium, så du kan undgå farlige dampe.

Sikkerhetsinformasjon

- Hvis produktet ditt ikke er merket med dette symbolet, ⧈, må det bare kobles til en stikkontakt som er jordet.
- Ledningen må være koblet til en stikkontakt nær produktet. Stikkontakten må være lett tilgjengelig.
- La bare kvalifisert personale ta seg av service og reparasjon som ikke er direkte beskrevet i bruksanvisningen.
- Dette produktet er utviklet, testet og godkjent i overensstemmelse med strenge verdensomspennende sikkerhetsstandarder for bestemte Lexmark-deler. Delenes sikkerhetsfunksjoner kan være skjulte. Lexmark er ikke ansvarlig for bruk av uoriginale reservedeler.
- Produktet ditt bruker en laser.
  ADVARSEL: Bruk av styremekanismer, innstillinger eller fremgangsmåter som ikke er beskrevet her, kan resultere i farlig utstråling.
- Produktet ditt bruker en utskriftsprosess som varmer opp skrivemediet, og varmen kan føre til utslipp. Forsikre deg om at du forstår den delen av bruksanvisningen som omhandler valg av utskriftsmedium, slik at du kan unngå farlige utslipp.

Säkerhetsanvisningar

- Om produkten INTE är märkt med denna symbol ⧈ MÅSTE den anslutas till ett jordat vägguttag.
- Nätkabeln måste anslutas till ett lättåtkomligt vägguttag i närheten av maskinen.
- Låt endast utbildad servicepersonal utföra sådan service och sådana reparationer som inte beskrivs i handledningen.
- Denna produkt är utformad, testad och godkänd för att uppfylla internationella säkerhetsbestämmelser när den används tillsammans med andra Lexmark-produkter. Säkerhetsegenskaperna för vissa delar är inte helt uppenbara. Lexmark frånsäger sig ansvaret om delar av ett annat fabrikat används.
- Var försiktig - maskinen använder laser.
  VARNING! Det finns risk att du utsätter dig för hälsovådlig strålning om du använder andra reglage eller justeringar, eller om du utför andra procedurer än de som beskrivs här.
- Maskinen använder en utskriftsmetod som upphettar utskriftsmaterialet. Hettan kan i vissa fall leda till att materialet avger partiklar. Undvik skadliga partiklar genom att noga läsa det avsnitt i handledningen som beskriver hur man väljer utskriftsmaterial.

Informació de Seguretat

- Si el vostre producte NO està marcat amb el símbol ⧈ , S'HAURÀ de connectar a una presa elèctrica de terra.
- El cable de potència s'haurà de connectar a una presa de corrent propera al producte i fàcilment accessible.
- Si heu de fer una reparació que no figuri entre les descrites a les instruccions de funcionament, confieu-la a un professional.
- Aquest producte està dissenyat, comprovat i aprovat per tal d'acomplir les estrictes normes de seguretat globals amb la utililització de components específics de Lexmark. Les característiques de seguretat d'algunes peces pot ser que no sempre siguin òbvies. Lexmark no es responsabilitza de l'us d'altres peces de recanvi.
- El vostre producte funciona amb un làser. Procediu amb
  PRECAUCIÓ: La utilització de controls, els ajustaments o la realització de procediments distints dels especificats aquí poden donar lloc a una exposició a radiacions perillosa.
- El vostre producte fa servir un procediment d'impressió que escalfa el mitjà d'impressió, i la calor pot fer que aquest mitjà alliberi emissions. Llegiu atentament l'apartat de les instruccions de funcionament on s'exposen les directrius de selecció del mitjà d'emissió per tal d'evitar la possibilitat d'emissions nocives.

Turvaohjeet

- Jos tuotteessa ei ole tätä tunnusta, ⧈ , sen saa kytkeä vain maadoitettuun pistorasiaan.

- Tuotteen verkkojohto on kytkettävä sitä lähellä olevaan pistorasiaan. Varmista, että kulku pistorasian luo on esteetön.
- Muut kuin käyttöohjeissa mainitut huolto- tai korjaustoimet on jätettävä huoltoedustajalle.
- Tämä tuote on testattu ja hyväksytty. Se täyttää korkeat maailmanlaajuiset turvallisuusvaatimukset, kun siinä käytetään tiettyjä Lexmarkin valmistusosia. Joidenkin osien turvallisuusominaisuudet eivät aina ole itsestään selviä. Lexmark ei vastaa muiden kuin alkuperäisten osien käytöstä.
- Laite sisältää lasertuotteen.
  Varoitus: Muiden kuin tässä mainittujen säätöjen tai toimien teko voi saattaa käyttäjän alttiiksi vaaralliselle säteilylle.
- Tulostusmateriaali kuumenee tulostusprosessin aikana. Lämmön vaikutuksesta materiaalista saattaa irrota haitallisia aineita. Voit välttää haitalliset päästöt noudattamalla käyttöohjeissa annettuja tulostusmateriaalien valintaohjeita.

Informações de Segurança

- Se o produto NÃO estiver marcado com este símbolo, ⧈ , é necessário ligá-lo a uma tomada com ligação à terra.
- O cabo deve ser ligado a uma tomada localizada perto do produto e facilmente acessível.
- Para todos os serviços ou reparações não referidos nas instruções de operação, deve contactar um técnico dos serviços de assistência.
- Este produto foi concebido, testado e aprovado para satisfazer os padrões globais de segurança na utilização de componentes específicos da Lexmark. As funções de segurança de alguns dos componentes podem não ser sempre óbvias. A Lexmark não é responsável pela utilização de outros componentes de substituição.
- O produto utiliza raios laser, tome
  CUIDADO: O uso de controlos, ajustamentos ou a execução de procedimentos diferentes dos especificados podem ocasionar exposição perigosa a radiações.
- O produto utiliza um processo de impressão que aquece os materiais de impressão. Devido ao aquecimento, estes podem libertar emissões radioactivas. É necessário compreender as instruções de operação relativas à escolha dos materiais de impressão a fim de evitar emissões perigosas.

Informações de Segurança

- Se o produto NÃO estiver marcado com este símbolo, ⧈ , ele DEVE SER conectado a uma tomada elétrica com ligação à terra.
- O cabo de alimentação deve ser conectado a uma tomada elétrica localizada perto do produto e de fácil acesso.
- Para todos os serviços ou reparações não descritos nas instruções de operação, entre em contato com um técnico dos serviços de assistência.

- Este produto está projetado, testado e aprovado para satisfazer os padrões globais de segurança para uso de componentes específicos da Lexmark. Os recursos de segurança de alguns componentes podem não ser sempre óbvios. A Lexmark não é responsável pelo uso de outros componentes de substituição.
- O produto usa raios laser, tome
  CUIDADO: O uso de controles, ajustes ou a execução de procedimentos diferentes dos especificados podem resultar em exposição perigosa a radiações.
- O produto usa um processo de impressão que aquece o meio de impressão. Devido ao aquecimento, o meio pode liberar emissões. É necessário que você entenda as instruções de operação sobre a escolha do meio de impressão, para evitar emissões perigosas.

Информация по технике безопасности

- Если приобретенное Вами изделие НЕ имеет маркировки ⧈, то его НЕОБХОДИМО подключать к надежно заземленной розетке.
- Кабель питания следует подключать к легкодоступной электрической розетке, расположенной вблизи от места установки изделия.
- Операции по обслуживанию и ремонту, за исключением описанных в настоящем Руководстве, должны выполняться специально обученным персоналом.
- Данное изделие спроектировано, испытано и прошло аттестацию на соответствии жестким глобальным стандартам безопасности в расчете на использование определенных частей производства фирмы Lexmark. Влияние отдельных деталей на безопасность не всегда очевидно. Фирма Lexmark не несет ответственности за использование запасных частей, отличных от рекомендованных.
- Если в изделии используется лазер:
  ОСТОРОЖНО! Регулировка или выполнение любых других операций, кроме указанных в настоящем документе, могут привести к опасному воздействию излучения.
- При печати на приобретенном Вами изделии происходит нагрев бумаги, что может привести к выделению из нее паров. Чтобы избежать воздействия вредных веществ, изучите раздел руководства по эксплуатации, в котором обсуждается вопрос выбора бумаги.

Przepisy bezpieczeństwa

Jeżeli produkt NIE jest oznaczony symbolem ⧈, może być podłączony TYLKO do prawidłowo uziemionego gniazda elektrycznego.

Kabel zasilający musi być podłączony do łatwo dostępnego gniazda elektrycznego, znajdującego się w pobliżu urządzenia.

Wszelkie naprawy i czynności serwisowe, oprócz opisanych w instrukcji obsługi, powinny być wykonywane przez autoryzowany serwis.

Produkt został zaprojektowany z wykorzystaniem określonych podzespołów firmy Lexmark i zatwierdzony jako spełniający światowe standardy bezpieczeństwa. Pozostałe podzespoły mogą nie spełniać tych warunków. Firma Lexmark nie ponosi odpowiedzialności za skutki używania innych części zamiennych.

Produkt wykorzystuje laser.
UWAGA: Regulowanie, ustawianie i wykonywanie czynności innych niż tu określone, może narazić na ryzyko szkodliwego napromieniowania.

Proces drukowania związany jest z podgrzewaniem nośnika, co może spowodować emisję związków chemicznych. Aby zmniejszyć ryzyko emisji szkodliwych substancji, należy zapoznać się ze wskazówkami dotyczącymi wyboru nośnika, zawartymi w odpowiednim rozdziale instrukcji użytkownika.

Safety

Güvenlik Bilgisi

- Ürünüzde ⧈ simgesi YOKSA, ürün doğru biçimde topraklanmış bir elektrik prizine TAKILMALIDIR.
- Güç kablosu, ürünün yakınında ve kolay ulaşılabilir bir elektrik prizine takılmalıdır.
- İşletim yönergelerinde açıklananlar dışında servis veya onarım için yetkili servis personeline başvurun.
- Bu ürün, özel Lexmark bileşenlerinin kullanımı konusundaki genel güvenlik standartlarına uyacak biçimde tasarlanmış, denenmiş ve onaylanmıştır. Bazı parçaların güvenlik özellikleri her zaman kesin olmaz. Lexmark, başka yedek parçaların kullanımından sorumluluk taşımaz.
- Ürününüz lazer kullanmaktadır,
  DİKKAT: Burada belirtilenler dışında denetimler veya ayarlamalar veya yordam uygulamaları yaptığınız takdirde, beklenmedik radyasyon yayılımına yol açabilirsiniz.
- Ürününüz, üzerine baskı yaptığınız malzemeyi ısıtan bir yazdırma süreci kullanmaktadır ve ısı, üzerine baskı yaptığınız malzemenin emisyonu bırakmasına neden olabaliri. İşletim yönergelerinizde, zararlı emisyon olanağını engellemek üzere üzerine baskı yapılacak malzemeyi seçme konusundaki ana hatları içeren bölümü dikkatli biçimde okuyunuz.

Safety

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Safety

Warranty

Statement of Limited Warranty

Lexmark International, Inc., Lexington, KY

This warranty applies to the United States and Canada. For customers outside the U.S. and Canada, refer to the country-specific warranty information that came with your printer.

Optra S Laser Printers

This Statement of Limited Warranty applies to this product if it was originally purchased for your use, and not for resale, from Lexmark or a Lexmark remarketer, referred to in this statement as "Remarketer."

Warranty

Lexmark warrants that this product:

- Is manufactured from new parts, or new and serviceable used parts, which perform like new parts,
- Is free from defects in material and workmanship,
- Conforms to Lexmark's official published specifications, and
- Is in good working order.

If this product does not function as warranted during the warranty period, contact a Remarketer or Lexmark for repair without charge.

If this product is a feature or option, this statement applies only when that feature or option is used with the product for which it was designed. To obtain warranty service, you may be required to present the feature or option with the product.

If you transfer this product to another user, warranty service under the terms of this statement is available to that user for the remainder of the warranty period. You should transfer proof of original purchase and this statement to that user.

Warranty Service

The warranty period is 12 months and starts on the date of original purchase as shown on the purchase receipt. Warranty service is model specific and will be provided:

- for the Optra S 2455, at your location.

- for the Optra S 1855, Optra S 1625 or Optra S 1255, at a Remarketer or a Lexmark designated location. You may be required to deliver your product to the Remarketer or Lexmark, or ship it prepaid and suitably packaged to a Lexmark designated location. You are responsible for loss of, or damage to, a product in transit to the Remarketer or the Lexmark designated location.

When warranty service involves the exchange of a product or part, the item replaced becomes the property of the Remarketer or Lexmark. The replacement may be a new or repaired item. The replacement item assumes the remaining warranty period of the original product.

Replacement is not available to you if the product you present for exchange is defaced, altered, in need of a repair not included in warranty service, or damaged beyond repair. Also, such product must be free of any legal obligation or restrictions that prevent its exchange.

Before you present this product for warranty service, remove all programs, data, and removable storage media.

For further explanation of your warranty alternatives and the nearest Lexmark authorized servicer in your area, please contact Lexmark at 1-800-LEXMARK (1-800-539-6275), or on the World Wide Web at http://www.lexmark.com.

Extent of Warranty

We do not warrant uninterrupted or error-free operation of a product.

Warranty service does not include repair of failures caused by:

- modification or attachments
- accidents or misuse
- unsuitable physical or operating environment
- maintenance by anyone other than Lexmark or a Lexmark authorized servicer
- operation of a product beyond the limit of its duty cycle
- failure to have installed a maintenance kit as specified (if applicable)
- use of printing media outside of Lexmark specifications
- use of other than Lexmark supplies (such as toner cartridges, inkjet cartridges, and ribbons)
- use of other than Lexmark product or component

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Limitation of Liability

Your sole remedy under this Statement of Limited Warranty is set forth in this section. For any claim concerning performance or nonperformance of Lexmark or a Remarketer for this product under this Statement of Limited Warranty, you may recover actual damages up to the limit set forth in the following paragraph.

Lexmark's liability for actual damages from any cause whatsoever will be limited to the greater of 1) $5,000 or 2) the amount you paid for the product that caused the damages. This limitation of liability will not apply to claims by you for bodily injury or damage to real property or tangible personal property for which Lexmark is legally liable. In no event will Lexmark be liable for any lost profits, lost savings, incidental damage, or other economic consequential damages. This is true even if you advise Lexmark or a Remarketer of the possibility of such damages. Lexmark is not liable for any claim by you based on a third party claim.

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This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

Glossary

A

A4
Paper measuring 210 x 297 mm.

A5
Paper measuring 148 x 210 mm.

all points addressable (APA)
In computer graphics, the ability to address and display or not display each picture element (pel) on a display surface.

APA
See *all points addressable*.

application
See *software application*.

auto size sensing
A function of some paper trays that inform the printer of the paper size loaded.

automated fax system
Lexmark's quick turnaround system for providing customers product information, technical tips, and printer driver information. The automated attendant walks the customer through the steps necessary to receive information by fax.

automatic interface
A printer function that determines the active interface: LocalTalk, parallel, serial or network.

B

B5
(1) Envelope measuring 176 x 250 mm.
(2) Paper measuring 182 x 257 mm.

baud
The rate at which data is being sent to or received from the computer through the serial interface, in bits per second (bps).

bidirectional communication
Two-way communication between your printer and a computer, using Network Printing Alliance Protocol (NPAP 1.0 standard).

bitmapped font
Typefaces set in specific sizes and styles. Bitmapped fonts are mapped out bit-by-bit.

bits per second (bps)
A measurement of the speed of data being transferred through a serial interface.

bps
See *bits per second*.

buffer
A portion of memory used to temporarily store data.

Busy
A state in which the printer is processing data or printing pages.

C

C5
Envelope measuring 162 x 229 mm.

card stock
Heavy, single-ply paper frequently used for reports or book covers.

Centronics parallel interface
A standard for connecting printers and other peripheral devices to a computer. It defines the plug, socket, and electrical signals that are used for controlling the transmission of data.

configuration
(1) The arrangement of a computer system, printer, or network. (2) The devices and programs that make up a system, subsystem, or network.

curl
The curvature at the edge of a sheet of paper.

D

Data Set Ready (DSR)
A “handshaking” signal contained in a serial interface indicating the device is ready to exchange information.

data stream
Print data and control information flowing from the host system (computer) to the printer from beginning to end without interruption.

Data Terminal Ready (DTR)
A “handshaking” signal in a serial interface indicating the device is ready to exchange information.

default
An attribute, value, or setting that is assumed when none is explicitly specified.

display
The area of the operator panel consisting of a liquid crystal display that shows printer menus and messages.

DL
Envelope measuring 110 x 220 mm.

download
To transfer information, such as fonts, from a diskette or other device to your computer or printer for temporary or permanent storage.

dpi
Dots per inch. See *resolution*.

DRAM
See *dynamic random access memory*.

driver
See *printer driver*.

DSR
See *Data Set Ready*.

DTR
See *Data Terminal Ready*.

duplex
Printing on both sides of a sheet of paper.

dynamic random access memory (DRAM)
Memory that allows rapid storing and retrieving of data. DRAM contents are erased when electrical power is turned off.

E

emulation
The imitation by a printer of another printer processing language or functions; for example, PCL 5 emulation imitates the printer language used with the Hewlett-Packard LaserJet printer.

error message
A message that appears on the operator panel display describing a printer problem. The printer requires operator intervention before it can continue processing.

Ethernet
A network that utilizes carrier sense multiple access with collision detection (CSMA / CD). For example:

- 10BaseT Ethernet network uses telephone twisted-pair.
- 10Base2 Ethernet network uses RG-58 coax cable (also referred to as Cheapnet or Thicknet).

executive paper
Paper measuring 7.25 x 10.5 in.

external network adapter
A LAN connector that attaches externally to the printer and allows you to connect various printers from the manufacturers to your network, thereby freeing dedicated PC print servers for use as LAN workstations.

font
A family or set of characters that have common visual characteristics, such as size, weight, and style; for example, Courier 10 Italic.

fuser
The part of the printer that uses heat and pressure to make toner stick to the paper.

F

factory default
Printer setting defined when the printer is manufactured.

Fastbytes protocol
A parallel printer protocol that enables the printer to receive information at faster transmission rates than normal.

fixed-pitch font
A font that prints each character in a *fixed* amount of horizontal space, regardless of the width of the character. These fonts are identified by the number of characters that print in 1 inch of horizontal line space, such as 10 pitch or 12 pitch.

flash memory
Optional memory that provides non-volatile storage for downloaded fonts, symbol sets, or macros.

G

grain
The alignment of the paper fibers in a sheet of paper. For example, in grain long paper, the fibers run the length of the page.

g/m^2
Grams per square meter. Metric measurement for paper weight.

H

handshaking
The exchange of predetermined signals when a connection is established.

hex trace
A diagnostic printer mode that lets you print the uninterpreted printer data stream so you can see a hexadecimal and character representation of a print job.

Honor INIT
A printer setting that allows the printer to be reset by an initialization signal sent from the computer.

I

INA
See *Network Option*.

Installation Utilities
A group of printer utilities that help you set up and test the printer, install and configure printer drivers, and manage printer functions after setup.

Integrated Network Option
See *Network Option*.

interface
The connection between the computer and the printer.

internal network adapter (INA)
See *Network Option*.

K

KB
Kilobyte; 1024 bytes.

L

LAN
See *local area network*.

landscape orientation
Printed page orientation in which the width of the page is greater than the height.

LCD
See *Liquid crystal display*.

leading edge
The edge of the printer page that exits the printer first.

legal paper
Paper measuring 8.5 x 14 in.

letter paper
Paper measuring 8.5 x 11 in.

lines per page (lpp)
The number of lines of text that can be printed on one page.

link
The connection between the computer system or Local Area Network and the printer.

liquid crystal display (LCD)
The technology that displays menu selections and messages on the operator panel.

local area network (LAN)
A computer network located on a user's premises within a limited geographical area.

long-edge binding
When printing two-sided pages (duplex printing), arranging the orientation and layout for the pages to be bound along the long side of the pages.

LPTx
A representation of one of the logical parallel ports (for example, LPT1) on a personal computer.

M

macro
A collection of commands grouped together and temporarily or permanently stored in printer memory.

MarkVision
A printer utility that works with the printer bidirectional communication capability to provide continuous printer status and to allow you to configure multiple printers from a single setup file.

MB
Megabyte; 1,048,576 bytes.

menu
The choices for displaying, altering, or testing printer features and settings.

monospaced font
A font in which the space for each character does not vary, regardless of the width of the character.

N

network
A group of computers, printers, and other hardware devices connected to each other so they can share information.

Network Option
The network card and network printer utility that connects your printer to a local area network.

non-volatile random access memory (NVRAM)
Memory that allows rapid storing and retrieving of data. NVRAM contents are preserved when electrical power is turned off.

Not Ready
A printer state in which the printer does not accept data from the host computer. This state is initiated either by operator intervention or a printer error.

O

operator panel
The buttons and liquid crystal display used to change printer settings and display printer status.

operator panel display
See *display*.

Other Envelope
Envelope size value to select for envelope sizes other than those listed in the menu; defaults to 215.9 x 355.6 mm (8.5 x 14 in.)

output bin
The paper exit area on top of the printer. If you select the standard output bin, paper exits face down, collated.

output expander
The optional output expander which is attached to the printer once the printer top cover is removed. If you select Bin 1, Bin 2, or Bin 3 depending on how many output expanders are installed, the paper exits face down, collated to the selected bin.

overlay
Background text or graphics intended to appear the same in each file where the overlay is applied.

P

pages per minute (ppm)
The number of typical pages of text that can be printed in one minute.

parallel interface
A bidirectional interface where data is exchanged between the computer and the printer.

pel
Picture element. The smallest addressable unit that can be effectively reproduced by the printer.

pitch
A unit of measure that designates the number of characters that can be printed in 1 horizontal inch. For example, a 10-pitch font prints 10 characters per inch (cpi).

point
A unit of measure that designates the height of a printed character (1 point = 1/72 in.).

point size
The height of the characters in a font.

portrait orientation
Printed page orientation in which the height of the page is greater than the width.

ppm
See *pages per minute*.

PQET
See *Print Quality Enhancement Technology*.

print cartridge
The replaceable unit inside the printer that contains the photoconductor and toner supply.

print material
Any materials you print on, such as paper, envelopes, labels, card stock, and transparencies.

Print Quality Enhancement Technology (PQET)
A printer feature that improves the quality of text by smoothing the edges of characters and lines.

printer driver
A program that translates the language of a software application to the language of the printer so the two can communicate data.

proportionally spaced font
A font that varies with the width of the character to allow uniform spacing around characters.

protocol
A set of rules governing the communication and the transfer of data between two or more devices in a communication system.

R

RAM
See *random access memory*.

random access memory (RAM)
Memory that allows rapid storing and retrieving of data. RAM contents are erased when electrical power is turned off.

Ready
State of the printer in which it can receive, process, and print data.

resolution
A measure of the sharpness of a printer image, expressed in the number of dots per inch (dpi).

S

scalable font
A font whose characters are stored only as outlines so it is easy to change (or scale) the size of the characters (measured in points).

screen font
A font you download to your computer so it appears the same on the computer screen as it does on a printed page.

serial interface
A way of communicating between computer and printer by transmitting data one bit at a time.

server
A device that allows people using LAN workstations to share resources such as printers on a network.

service message
A printer message that indicates the printer needs service.

setting
Values you choose from printer menus or software applications that control the printer operation and the appearance of the printed page.

setup utility
A program provided with the printer to install printer drivers, test printer setup, and complete the setup of printer options.

short-edge binding
When printing two-sided pages (duplex printing), arranging the orientation and layout for the pages to be bound along the short side of the pages.

simplex
See *single-sided printing*.

single-sided printing
Also called simplex. Printing on only one side of a sheet of paper.

SmartSwitch
A printer function that automatically switches the printer language to that of the job the software application is sending to the printer.

software application
Any program loaded on your computer used to perform a specific task, such as word processing or data compiling.

Standard protocol
A parallel printer protocol where the printer can receive information sent from the computer at a normal transmission rate.

status message
A printer message that gives information on the state of the printer.

symbol set
A unique set of alphanumeric characters and symbols that the printer uses to print the requested font. Different symbol sets offer the diverse characters required for different languages or symbol-intense applications.

system board
The printer main circuit board.

T

timeout
A time interval allotted for certain operations to occur.

Token-Ring
A type of network communication that conforms to IEEE 802.5 standard. The name is derived from its physical ring configuration and the passing of a token from adapter to adapter.

toner
The material that adheres to the paper or print media to create the printed page.

toner cartridge
The replaceable units inside the printer that contain the toner supply.

Toolkit
A group of utilities shipped with the printer that help you perform routine printer functions, such as downloading fonts, installing screen fonts, sending printer commands, and so on.

tray linking
A means of increasing the capacity of the paper source by having the printer automatically switch between trays until all trays are empty.

TrueType fonts
Fonts used by Microsoft Windows that use a single font outline for both screen display and printing. You can scale TrueType fonts to any height, and they print exactly as they appear on the screen.

type size
A measurement in pitch or points of a graphic character in a font.

type style
The form or shape of the characters in a font.

typeface
The style that defines a group of characters and symbols.

typographic fonts
Fonts whose characters are spaced proportionally on the page according to character width.

U

user default
Printer setting selected by a user that is different from the one defined during printer manufacturing (the factory default).

V

value
The available settings for a specific menu item.

W

watermark
See *overlay*.

weight
The thickness of the typeface line.

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